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ENGLISH AGRICULTURE SINCE 1914

I. THE WAR PERIOD

At the outbreak of the war English agriculture was in a fairly prosperous condition. The great depression, which for more than thirty years had made farming little better than a wild attempt to fly from disaster, was succeeded by an unmistakable recovery in the first decade of the new century. At enormous cost to landlords and farmers the industry had adjusted itself to the condition of the world's market. By 1910 the arable area in England and Wales, which in the period 1871–75 averaged more than $14\frac{3}{4}$ million acres, had been reduced to less than $11\frac{1}{2}$ million acres; and the census of 1911 as compared with that of 1871 shows a decline of over 200,000 in the number of persons who were returned as engaged in agriculture.[1] In the meantime rents had been reduced; and technique had improved, more especially in those branches of agriculture which seemed least endangered by foreign competition—that is to say, stock breeding and dairying. These adjustments help to explain the recovery which took place when prices began to move upward under the

[1] The census of 1901 gives the minimum. Between 1901 and 1911 there was an increase of over 18,000 in the number of persons returned.

influence of increased gold production. With the industry adapted to a régime of low prices it was not necessary that prices should reach anything approaching their old level to give farmers substantial encouragement; and in fact, though the rise in the prices of agricultural products was in most cases somewhat below the rise of prices in general as shown by Sauerbeck's index numbers, the prospects of farming became on the whole fairly good. The outlook as revealed in Sir Daniel Hall's *Pilgrimage of British Farming*, which was the result of tours undertaken by the author (then Mr. A. D. Hall) in 1910, 1911, and 1912, affords a striking contrast to the gloomy picture of the condition of affairs only ten years before painted by Sir H. Rider Haggard in his *Rural England*.[1] There was a marked decline in the number of farming bankruptcies, the annual average number being 453 from 1892 to 1898, 315 from 1899 to 1905, and 299 from 1906 to 1912.[2] In 1912, Mr. Edward Strutt—a very great authority on the subject—considered it "probable that a large proportion of the second-class grasslands of the south and east of England, and perhaps some of the east Midlands, could be reconverted into arable with considerable profit to those engaged in their cultivation."[3]

But though the outlook for English agriculture in 1914 was favorable, it cannot be said that the opportunities which were opening out were fully used. The landlords, impoverished by the depression and still bound by family traditions to maintain their estates intact even when burdened under family settlements with the payment of large sums to collateral relations, lacked the capital requisite for the proper development of their land. They also lacked the knowledge which had enabled their grandfathers to be the pioneers of agricultural improvement. And they were still imbued with a spirit of feudal paternalism, which made them

[1] See, for example, Hall, *Pilgrimage of British Farming*, pp. 431, 437–38.

[2] See R. Lennard, *Economic Notes on English Agricultural Wages* (1914), p. 52.

[3] See E. G. Strutt, *Presidential Address to the Surveyors' Institution* (November 11, 1912), p. 6. On the general question see the *Interim Report of the Royal Commission on Agriculture of 1919*, Cmd. 473 ("Majority Report," § 5; "Minority Report," § 3); also R. E. Prothero (Lord Ernle), *English Farming Past and Present* (1912), p. 382.

too lenient to inefficient tenants, so that the years of depression had done less to bring about a "survival of the fittest" among tenant-farmers than might have been expected.[1] The farmers, again, though their position and prospects were markedly improved, in many cases failed to take advantage of the times. Many were still burdened with debts incurred during the depression. A period of hardship had impaired the spirit of enterprise and induced a spirit of timidity. As a class they suffered from defective education. Though the best English farming was as good as any in the world and English pedigree stock was almost unrivaled, the average of English farming fell short of the standard which might not unreasonably have been expected and was to a marked degree inferior to that which obtained in Scotland.[2] It is significant that the contraction of the arable area continued after the period of recovery began. In 1900 there were 12,217,208 acres of arable in England and Wales: in 1905 the figure had sunk to 11,656,079, in 1910 to 11,320,444, and in 1914 to 10,998,254. Between 1900 and 1914 the year 1912 was the only one which witnessed any movement in the contrary direction.

Along with the factors mentioned above as inimical to the full realization of the improved opportunities, something must also be allowed for the alarm occasioned by the radical program of Mr. Lloyd George in the years immediately preceding the war. As the landowners were terrified by the budget of 1909, so the farmers were terrified by the proposed minimum wage for farm laborers which was the most important element in the land program of 1913.[3] It is difficult of course to gauge the influence exercised by such fears, because they were fostered and paraded

[1] See Strutt, *op. cit.*, p. 30. As regards the dearth of agricultural knowledge among modern landlords a shrewd observer once suggested to me that the development of athletics in the public schools was a contributing factor: games attracted the squire's sons, so that they took less part in the sports of country life. On the failings and difficulties of landlords see Prothero, *op. cit.*, pp. 400–401; Hall, *op. cit.*, p. 437; J. Orr, *Agriculture in Oxfordshire* (1916), pp. 115, 118–19; *Report of the Agricultural Policy Sub-Committee of the Reconstruction Committee* (Lord Selborne's Committee), Cd. 9079 (1918), Part I, § 18.

[2] See Hall, *op. cit.*, pp. 150–53, 440–42; cf. Christopher Turnor, *The Land and Its Problems* (1921), pp. 51, 54–56.

[3] See Prothero, *op. cit.*, chap. xix, *passim;* J. A. R. Marriott, *The English Land System* (1914), p. 133.

for political purposes. But they deserve mention; and the subject of the minimum wage brings one naturally to the consideration of another feature of English rural economy on the eve of the war—the condition of the agricultural laborer.

The class which forms the great bulk of the agricultural community had suffered rather than gained by the recent rise in prices, for wages had not been advanced in proportion to the increase in the cost of living.[1] The advisability of minimum-wage regulation was being discussed as early as the summer of 1912; and though political animosities and the traditional conservatism of the landowners somewhat clouded the issue, there was a growing feeling that the poverty of the laborers was a national disgrace, and that minimum-wage regulation was the inevitable remedy.[2] A report of the Board of Trade, issued in 1910, showed that the total earnings of all classes of farm laborers in England only average 18/4 a week in 1907; that for ordinary laborers alone the corresponding figures was 17/6; and that for Oxfordshire, the county of lowest wages, the total average earnings of the ordinary laborer were 14/11.[3] The Land Enquiry Committee estimated that between 1907 and 1912 the cash wages of ordinary farm laborers only increased as from 102 to 104.9.[4] In 1913 the condition of the class was illumined by the publica-

[1] The report of Mr. Lloyd George's Land Enquiry Committee, which was published in 1913, stated that "the real earnings of nearly 60 per cent of the ordinary agricultural laborers have actually decreased since 1907"; see *The Land*, I (Rural), 12.

[2] A Unionist Minimum Wage Bill for farm laborers was introduced in the House of Commons in May, 1913; a Labor Party Bill was introduced a few weeks later. Though most of the opponents of the minimum wage were to be found in the ranks of the unionists, and its most ardent advocates were either liberals or members of the labor party, the work done by the small group of progressive unionists deserves recognition. Among them Sir Leslie Scott, the present Solicitor General, was prominent. Mr. Turnor (*op. cit.*, p. 24), speaking of agricultural wages, says: "Several years before the war this low rate of pay had begun to weigh upon the national conscience, and many farmers themselves realized that wages should be higher; there was a general consensus of opinion that 20/– a week in cash should be the minimum wage." See also Hall, *op. cit.*, pp. 153, 443.

[3] See Cd. 5460, pp. xvi, xvii.

[4] See *op. cit.*, p. 11. Judging by my own observations, I should say that in North Oxfordshire any advance in wages in that period was very unusual. About 1912–13 the ordinary laborer's weekly cash wage in that district was still 12/–; and 14/6 would be a generous estimate of the weekly average value of earnings of

tion of a volume called *How the Laborer Lives* by Mr. B. Seebohm Rowntree and Miss May Kendall. This book contained detailed studies of the weekly budgets of forty-two laboring families, mainly in Yorkshire, Essex, and Oxfordshire, and reached the conclusion that "on the average the forty-two families investigated are receiving not much more than three-fourths of the nourishment necessary for the maintenance of physical health."[1] Nor was an insufficient income the only trouble of the laborer. The shortage of cottages was acute, and many cottages were unsanitary and deficient in bedroom accommodation.[2] Moreover, the farm hand had little prospect of advancement, except by emigration or by deserting agriculture for some other occupation. Farms as a rule were not large enough to allow of the creation of hierarchy of bailiffs and foremen and of an organized system of promotion. Small holdings, the creation of which had been encouraged by the Act of 1908, could do but little to improve matters, for, though the prospects of a small holding had been made somewhat better by the fall of cereal prices since 1870 (because cheap bread means an improved market for small holders' produce—fruit, vegetables, poultry, eggs, etc.), the opportunities before the small holder were, save in exceptional districts and in the case of exceptional men, strictly limited.[3]

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every description throughout the year—that was in fact the figure at which the total average weekly income was commonly assessed by farmers when insuring themselves against their liability under the Workmen's Compensation Acts. It must be remembered (1) that the man whose cash wages were lowest usually got least also in the way of extra earnings, and (2) that these "ordinary laborers" were a majority of the total number, at least in the low-wage counties. None the less I am inclined to think that the lot of the laborer improved during the period under discusssion, probably through a diminution in drinking and in the size of families.

[1] See B. S. Rowntree and M. Kendall, *How the Laborer Lives*, p. 304. Of the forty-two households nineteen were in counties of super-average wages, and abnormally large families were not chosen. Similar results were reached in 1903 by Mr. H. H. Mann and in 1905–6 by Miss M. F. Davies, see *Sociological Papers*, I, 161–93, and M. F. Davies, *Life in an English Village* (1909).

[2] See *Report of Land Enquiry Committee*, I, 83–107.

[3] The small holder in England usually needs subsidiary employment, e.g., in the way of hauling; but there is only a certain amount of such employment to be had, so that small holders cannot be very numerous in an ordinary village. For the small-holding movement see Hermann Levy, *Large and Small Holdings* (1911);

It seemed, too, unlikely that the laborers' lot would be appreciably improved by self-help in the way of trade unionism. The geographical dispersion of the industry, the low wages, the tendency of young men to leave agriculture for other callings, and the discouraging memory of failure in the past were all factors which hampered the growth of trade-unionist organization. Old-fashioned prejudices which regarded a trade union as a horrible and revolutionary thing still lingered among employers and landlords, and wild acts of hostility were still possible. In February, 1914, some farmers in Essex decided to dismiss and evict their men unless these ceased to be members of the union which they had recently joined. In Northamptonshire similar action was taken a little later by Lord Lilford and the tenant farmers on his estate, and it was reported in the *Times* on April 20 that "of the 70 laborers employed by Lord Lilford only half a dozen have thrown in their lot with the union in preference to retaining their positions." It is true that both in Essex and in Northamptonshire the settlement which was reached in the course of the summer was on the whole a victory for the men. It is also true that this early Victorian policy was vigorously condemned by the *Mark Lane Express*, which is the organ of the National Farmers' Union, as well as by the *Times*. The *Times* described Lord Lilford's position as "an antiquated attitude wholly out of touch with the current of thought and feeling to-day" and remarked that "the men have just as much right to belong to the Union if they choose as he has to belong to the Carlton Club." None the less the fact that laborers who joined a trade union were still liable to be treated in this fashion undoubtedly acted as a deterrent. Agricultural trade unionism was certainly making some progress in the period 1912–14. In 1912 the union which had been founded six years before in the Eastern Counties, and had been hard hit by an unsuccessful strike in 1910, was reorgan-

A. W. Ashby, *Allotments and Small Holdings in Oxfordshire* (1917); W. H. R. Curtler, *The Enclosure and Redistribution of Our Land* (1920). For a weighty criticism see C. S. Orwin, "The Small Holdings Craze," *Edinburgh Review*, April, 1916. In addition to other factors, one must remember that the poverty of the farm laborer made it impossible, in most cases, for him to save enough capital to start a small holding with any prospect of success.

ized as the National Agricultural Laborers' and Rural Workers' Union. At the end of 1913 it counted nearly 12,000 members, and in June, 1914, the total membership was some 15,000, distributed in twenty-six counties of England and Wales. Meanwhile, in 1910, the Workers' Union renewed its previously unsuccessful activities in rural districts and made considerable progress. Between December, 1912, and March, 1914, this union increased its membership by nearly 90,000; but probably only a small fraction of these were farm laborers. Two factors were at this time contributing to bring about a general growth of trade unionism in England. In the first place, as Mr. and Mrs. Webb have pointed out, the National Insurance Act of 1911, "which practically compelled every wage-earner to join an 'approved society' of some kind, led to a dramatic expansion of Trade Union membership."[1] Secondly the great miners' strike of 1912 meant that all over England non-unionists who were thrown out of work by lack of coal witnessed the spectacle of their fellows who were in a union drawing out-of-work benefit which they did not receive.[2] Among the agricultural laborers the revival of trade unionism helped to bring about a small but helpful increase of wages in some districts. In Lancashire an overtime rate was introduced, after a strike, in 1913. In Northamptonshire wages were raised 1/– a week; sixpence an hour overtime was granted for men earning over 16/– a week; and it was arranged that work should cease on Saturdays at 4:00 P.M. This was in the summer of 1914. In Essex the dispute ended on the very eve of the war, the wage being fixed at 15/– a week, which was 1/– less than the men had demanded.[3] But these developments are not sufficient to disturb the general conclusion that trade unionism could not adequately ameliorate the laborers' lot. The history of agricultural trade unionism in England is a lamentable story of temporary revivals followed by rapid decline, and though the change of conditions

[1] See S. and B. Webb, *History of Trade Unionism* (1920), p. 498.

[2] This situation was noticeable among railway workers, who form a connecting link between the rural districts and urban trade unionism.

[3] See the *Manchester Guardian*, August 5, 1914. There was also a rise of 1/– a week in some parts of Norfolk, but this seems to have been due less to trade-unionist activity than to the example set by His Majesty the King at Sandringham.

during the war has given better ground for hope as regards the future, it would be unwarrantable to regard the movement of the years 1912–14 as the initiation of a new era. In 1874 the National Agricultural Laborers' Union, of which Joseph Arch was the leader, had 86,000 odd members, but the next year saw its membership reduced to less than 59,000, and by 1894 it had only 1,100 members. At their strongest moments the rural laborers' unions before the war contained only a small fraction of the total number of agricultural wage-earners, and the *Times* was quite justified in describing the agricultural laborers, as it did on March 6, 1914, as "an unorganized body." In 1912, Mr. George Edwards, then general secretary of the Agricultural Laborers' and Rural Workers' Union, said: "Forty years' experience has convinced me that the laborers cannot get a living wage by Trade Union effort alone. The difficulties of organization are so great that we cannot get an organization strong enough to enforce it."[1]

The outbreak of war in 1914 had an immediate effect upon the agricultural situation in England, but at first the effect was only slight, and the changes which took place in the first two years of the war period seem insignificant in comparison with those which occurred later. The price of wheat, which had averaged 34/– a quarter at the end of July, rose to 40/3 in the week ending August 15, and there was a corresponding advance in the prices of barley and oats. But this did not herald a continuing upward movement, and it was not until after the middle of November, 1914, that the weekly average price of wheat reached 41/–. From that time onward until the early part of the summer of 1915 the advance of prices was more marked, and in the week ending June 5 the prices of wheat, barley, and oats respectively averaged 61/9, 35/4, and 32/5 as compared with 34/–, 25/11, and 19/4 in the corresponding week of 1914. In the case of wheat and oats, however, these prices were not maintained. Wheat was selling at 43/– in the middle of September: oats averaged 26/1 in the week ending September 25. Barley, on the other hand, appreciated considerably; but though wheat and oat prices moved upward during the

[1] See, for the whole question of agricultural trade unionism, E. Selley, *Village Trade Unions in Two Centuries* (1919); cf. R. Lennard, *op. cit.*, pp. 14–18.

winter of 1915–16 and the weekly average for wheat was never less than 50/– between the end of October and the middle of June, wheat came down to 46/3 at the beginning of July, and after June 12, 1915, the weekly average price of wheat never reached 60/– until October 21, 1916. At the time of autumn sowing in that year, there was little to indicate to the farmer that he was on the eve of a long period of very high prices.

Table I shows the chief changes in cropping which took place in this first period of the war in England and Wales. The figures

TABLE I

Year	Arable	Grain Crops Including Beans and Peas	Wheat	Barley	Oats	Potatoes
1913.....	11,058	5,719	1,702	1,559	1,975	442
1914.....	10,998	5,759	1,807	1,505	1,930	462
1915.....	10,966	5,934	2,170	1,232	2,088	463
1916.....	11,051	5,731	1,912	1,332	2,085	428

represent thousands of acres. The poor results attained by the end of 1916 were seriously disquieting. The arable area was actually less than it had been in 1913, and though the wheat area was more extensive than in the days before the war, the figure for 1916 shows a decline of more than a quarter of a million acres from the total of 1915, and in spite of the need for bread corn, farmers were devoting increasing attention to the production of barley. The acreage under potatoes was in 1916 considerably less than before the war.[1] Moreover the harvest of 1916 was poor.[2] At the end of the year it was estimated that the amount of winter wheat sown was 15 per cent less than in the preceding year.[3] On the very eve of the change of government, Mr. Acland (then Parliamentary Secretary to the Board of Agriculture), in

[1] This does not, of course, include potatoes grown in gardens and allotments.

[2] The yield of wheat was 28.60 bushels per acre, the average of the ten years 1907–16 being 31.40 bushels. The yield of potatoes was 5.85 tons per acre, as compared with a ten years' average of 6.16 tons.

[3] See *Report of the War Cabinet for 1917* (Cd. 9005), p. 156. It must be remembered that in England spring-sown wheat is always a small crop; even in 1918 it only amounted to 263,000 acres, and in 1921 had fallen to 65,000 acres.

answer to a question in the House of Commons, referred to the fact that "short harvests abroad, the development of submarine activity, and the bad weather of the last two months" had "made it clear that a very special effort must be made to maintain home food production," and on December 20 the new President of the Board, Mr. Prothero (now Lord Ernle), spoke of the country as being in the position of a "beleaguered city."[1] These statements are all the more significant because they were made before the declaration of unrestricted submarine warfare by Germany. It was on January 31, 1917, that the German government informed the American ambassador in Berlin of its intention "to abandon the limitations which it had hitherto imposed upon itself in the employment of its fighting weapons at sea." During the month of February some 500,000 tons of British merchant shipping were sunk.

It is difficult to acquit English farmers of the charge of a certain amount of supineness during 1916. It must, however, be remembered that the course of cereal prices had not hitherto pointed to a long continuance of conditions which would make a large extension of the arable area profitable. Secondly, the supply of agricultural labor had been greatly diminished by enlistments. By the beginning of 1917 some 250,000 agricultural laborers had joined the army, and a very large number had been attracted away from farm work by the higher wages which were to be obtained in munition factories, in the building of camps and aerodromes, and in other occupations connected with the war.[2]

[1] See Hansard's *Parliamentary Debates: House of Commons*, Vol. 88, col. 614–615 (Dec. 4, 1916) and col. 1534.

[2] See *Report of the Director-General of Food Production* (1918), p. 4. Those who knew the conditions of agricultural employment had long foreseen the danger of undue depletion of the ranks of farm labor by enlistment. The unit of production being small, the farmer has not so loud a voice wherewith to attract the attention of the government as, for example, a colliery or a railway company. And a shortage of bread is only felt when it is too late to repair it. If coal runs short, soldier miners can speedily be marched back to the mines; but no man can march back from harvest to seedtime. Some blame, however, attaches to English farmers for their slowness in raising wages sufficiently to diminish the attraction of other employments. In January, 1917, the average wage of ordinary farm laborers in

It is small wonder that the year 1917 saw state control substituted for the system of laissez faire in the sphere of British agriculture. The Food Production Department of the Board of Agriculture was set up on January 1, and this department was reorganized and the scope of its activities greatly enlarged in the following month.[1] Secondly, on January 10, a regulation was issued under the Defence of the Realm Act (Regulation 2 M.) which gave the Board of Agriculture power "to enter on and take possession of any land which in their opinion is not being so cultivated as to increase, as far as practicable, the food supply of the country, and after entry thereon, do all things necessary or desirable for the cultivation of the land or for adapting it to cultivation"; and also laid it down that the Board might "by notice served on the occupier of any land require him to cultivate the land in accordance with such requirements as the Board may think necessary or desirable for maintaining the food supply of the country and may prescribe in the notice." Finally the government introduced the Corn Production Bill, and this was read for the second time on April 25 and received the royal assent on August 21.

Besides giving the Board of Agriculture powers to direct farmers in the cultivation of their land—a provision which proved to have little importance because orders to plow up grass, and other directions, could be given and were given under Regulation 2 M. of the Defence of the Realm Act—the Corn Production Act did two important things, both of which seemed called for by the special circumstances of the time, but both of which had also been advocated as desirable features of a permanent agricultural

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England was 22/9; in Berkshire the winter rate in 1917 was from 15/- to 16/-; and, on April 24 in the same year, Mr. Prothero said in the House of Commons: "I know a certain farmer in a certain district who is paying his men 14/- a week and not a penny more." See *Report on Wages and Conditions of Employment in Agriculture*, I (Cmd. 24), 105–6; Hansard, *op. cit.*, House of Commons, Vol. 92, col. 2258; cf. E. Selley, *op. cit.*, p. 144. In general, farm laborers' wages at the beginning of 1917 were only some 50 per cent higher than in 1907, while the combined price of wheat, barley, and oats was in the last week of 1916 greater by 139 per cent than it had been on the eve of the war.

[1] See *Report of the Director-General of Food Production* (1918), pp. 11–12.

policy. The establishment of a legal minimum wage for farm laborers had been the foundation of the Land Campaign of 1913, and in 1917 the need of attracting fresh labor to the land, and the impossibility and injustice of giving lower wages to experienced agricultural workers than to unskilled townsmen who were physically unfit for military service, made it essential that farmers should be compelled to raise wages. Guaranteed minimum prices for cereals harmonized well with the long-cherished desire of the opponents of free trade to give an artificial stimulus to arable farming, and they had been advocated, as a war measure, in the *Interim Report* of Lord Milners' committee (July, 1915)[1] and, as part of a post-war policy of national security, by the Agricultural Policy Sub-Committee which had been appointed by Mr. Asquith with Lord Selborne as its chairman and presented the first part of its report at the end of January, 1917.[2] Even for the immediate purpose of stimulating corn production during the war it was felt that the guaranty must be for several years: if farmers were to be encouraged to plow up grassland, a sudden fall of prices on the conclusion of hostilities was the thing which they would especially desire to be insured against.

It is unnecessary to recount the provisions of the Corn Production Act in detail. As regards wages, the chief points to be noticed are: (1) that minimum-wage rates were to be fixed by a central Agricultural Wages Board consisting of representatives of employers and of workmen in equal numbers, and certain members appointed by the Board of Agriculture;[3] (2) that district

[1] See Cd. 8048, p. 4. In their final report, dated October 15, 1915, the Milner committee stated that they had only been unanimous in suggesting a guaranty for wheat "on the hypothesis that there was urgent danger to our imported food supplies owing to the activity of hostile submarines" and noted that the government had decided that this danger was not sufficiently great to justify the establishment of a guaranty. See Cd. 8095, pp. 3, 11.

[2] See Cd. 9079 (1918). The Selborne committee also recommended the establishment of a minimum wage.

[3] The appointed members were not to exceed one-quarter in number of the whole Board: actually the Board consisted of thirty-nine members, of whom seven were appointed. Because of the defective organization of both farmers and laborers, however, only half the representative members were actually elected by the organizations and half were selected by the Board.

committees were established to make recommendations to the Wages Board; (3) that the minimum wage was in no case to be less than 25/– a week for an able-bodied man; (4) that the minimum-wage rates might be fixed "so as to apply universally to workmen employed in agriculture, or to any special class of workmen in agriculture, or to any special area, or to any special class in a special area, subject in each case to any exceptions which may be made by the Agricultural Wages Board for employment of any special character, and so as to vary according as the employment is for a day, week, month, or other period, or according to the number of working hours or the conditions of the employment, or so as to provide for a differential rate in the case of overtime"; and (5) that an employer who failed to pay the minimum rate was liable to a substantial fine in addition to the repayment of arrears.[1] The act also authorized arrangements for the payment of rates less than the minimum to persons affected by mental or physical infirmity and for the valuation of allowances in kind. Guaranteed minimum prices were established for wheat and oats. For the crop of 1917 these prices were 60/– per quarter of 480 lb. in the case of wheat and 38/6 per quarter of 312 lb. for oats. The system was to continue until 1922; but the minimum prices were to fall in 1918 and 1919 to 55/– for wheat and 32/– for oats, and in the years 1920, 1921, and 1922 to 45/– for wheat and 24/– for oats. If the average price of a quarter of wheat or oats for seven months from the beginning of September in any year was less than the guaranteed minimum price for that year, the farmer was entitled to be paid four times the amount of the difference for every acre planted with wheat and five times the difference in the case of oats for every acre planted with that grain. The payments to the farmer might, however, be reduced or withheld altogether if the land had been negligently cultivated.[2]

It is interesting to compare the system and scale of guaranteed prices established by the Corn Production Act with the proposals

[1] The maximum fine was £20 for each offense plus £1 a day for the continuance of the offense after conviction.

[2] Rents were not to be raised above the figure which might have been obtained if the guaranties had not been established.

of the Milner and Selborne committees. The former committee had recommended a guaranty for wheat only, had suggested that 45/– a quarter should be guaranteed for four years, and had urged that "if, in the opinion of the Government, it is necessary that the promise of a guaranteed minimum should be accompanied by a maximum, the latter should, in our opinion, in no case be fixed at less than 55/– per quarter."[1] The Selborne committee went farther. It advocated that oats should be included in the scheme, that for the first two years after the conclusion of peace the guaranties should be "at least comparable to the prices ruling during the war itself," and that a permanent guaranty should be given of 42/– a quarter for wheat and 23/– for oats. Moreover the committee urged that these prices "certainly would not afford a justification for any attempt in times of peace to fix maximum prices for wheat or oats nor for requisitions of corn grown in the United Kingdom at less than the market price."[2] Both committees considered that the payments should only be made in respect of corn actually harvested.[3]

The Corn Production Act not only put the guaranteed prices higher than those recommended by the committees, but required that they should be paid on an acreage basis, the crop being assumed to be four quarters an acre in the case of wheat and five quarters in the case of oats.[4] The inclusion of oats, of course, made it difficult to pay for the actual crop, because oats are

[1] See Cd. 8048, pp. 4–5.

[2] See Cd. 9079, pp. 18–19.

[3] See Cd. 8048, p. 4; Cd. 9079, p. 19.

[4] The gradual expansion of the policy seems to illustrate the contention of free traders that protectionists, whether they advocate tariffs, bounties, or guaranteed prices, are always, like Oliver Twist, asking for more. In the *Majority Report of the Royal Commission of 1919* the inclusion of barley was recommended, the basic prices for the wheat and oat guaranties were considerably higher than those established for 1917 by the Corn Production Act, and the payment of these guaranties on an acreage basis was advocated as part of a permanent peace-time policy. One witness who gave evidence before the Commission urged that guaranteed prices should be established, not only for cereals, but for all agricultural products except milk; another championed a guaranty for milk; a third one for potatoes; two others, one for meat. See Cmd. 473, p. 8; Cmd. 365, qu. 5468; Cmd. 345, qu. 2358; Cmd. 391, qu. 10219; Cmd. 445, qu. 15570; Cmd. 665, qu. 17402.

largely consumed on the farm. The acreage basis too had the advantage of putting a premium upon the extension of the area under the two crops: the farmer who felt doubtful about the yield which would be obtained from grassland newly converted to arable would be encouraged by knowing that a poor crop would not diminish the sum payable under the guaranties. On the other hand the system might make farmers careless about yield and neglectful of rotations, and might conceivably incline them to plow up their worst land instead of land more suitable for cereals. It must, however, be remembered that the operation of ordinary economic motives was to some extent maintained by the fact that the crops the farmer grew remained his own to dispose of in the ordinary way, though it is also true that these motives were impeded by a system of maximum prices.

The establishment of maximum prices was connected with the upward sweep of prices which began toward the end of 1916; and in studying the history of English agriculture after the passing of the Corn Production Act it is essential to remember that, like the Corn Laws at certain periods of the Napoleonic Wars, its provisions in regard to guaranteed prices were swamped by the change in price levels. The guaranties never became operative.

At the beginning of July, 1916, English wheat was selling at 46/3—a lower figure than any which appears in the weekly averages since the third week in October, 1915, and one which was not greatly in excess of the average prices of the end of 1914. By the middle of November the price was over 70/– —a level not previously reached during the war. Moreover it continued to rise, and in the week ending April 14, 1917, averaged 85/2, having remained above 75/– ever since the end of December. On April 16 an order was issued fixing maximum prices for grain of the 1916 harvest—the prices being 78/– per 480 lb. for wheat, 65/– per 400 lb. for barley, and 55/– per 312 lb. for oats. The advance in wheat prices had been accompanied by a similar advance in the prices of the other cereals: in the week ending April 14, oats had averaged 57/2 and barley 71/10.

Henceforth maximum prices governed the markets, and their history has been summarized in the *Majority Report of the Royal*

Commission of 1919. "The maximum prices for the 1917 crops," say the Commissioners, "were fixed in August, 1917, in the case of wheat, rye and oats, by a scale based on date of delivery ranging from 73/6 to 77/9 per quarter of 504 lb. for wheat and rye, and 44/3 to 48/6 per quarter of 336 lb. for oats; and in the case of barley at a flat rate of 62/9 per quarter of 448 lb. For the 1918 crop, the corresponding prices were: for wheat and rye, 75/6 to 76/6; for oats, 47/6 to 52/–; and for barley, 67/– per quarter." The report adds that "the actual prices received by farmers for their crops approximated to these maximum prices."[1]

It is time now to return to the statistics of agricultural production. Table II shows the chief changes in cropping which

TABLE II

Year	Arable	Grain Crops Including Beans and Peas	Wheat	Barley	Oats	Potatoes
1916.....	11,051	5,731	1,912	1,332	2,085	428
1917.....	11,246	6,035	1,918	1,460	2,259	508
1918.....	12,399	7,481	2,557	1,501	2,780	634

took place in England and Wales in 1917 and 1918. The figures represent thousands of acres. These figures indicate a notable achievement. In two years the arable area was increased by 1,348,000 acres. That the wheat acreage increased so little between 1916 and 1917 is not surprising, for in England wheat is almost entirely autumn sown and the autumn seedtime was past before the factors making for increased production became operative. No doubt mistakes were sometimes, perhaps frequently, made in the process of breaking up pasture, and some land was plowed which it would have been better to retain as grass. But

[1] See Cmd. 473, § 15, p. 5. For certain agricultural products other than cereals maximum prices had been fixed somewhat earlier, e.g., hay and straw (June, 1916), milk (November, 1916), seed potatoes (January, 1917), ware potatoes, (February, 1917). See Report of the Committee appointed by the Agricultural Wages Board to inquire into the Financial Results of the Occupation of Agricultural Land and the Cost of Living of Rural Workers, Cmd. 76 (1919), pp. 4–8; cf. Benjamin H. Hibbard, *Effects of the Great War upon Agriculture in the United States and Great Britain* (1919), pp. 204–19.

estimates made in regard to a sample of about 78,000 acres distributed among more than 600 parishes suggest that on the whole the results justified the conversion. Table III, taken from the

TABLE III

	Estimated Yield on New Arable, 1918	Average Yield, England and Wales, 1918	Average of the Ten Years 1909–18
	Bushels	Bushels	Bushels
Wheat	31.3	32.9	31.1
Oats	40.7	41.3	39.4
Barley	28.8	32.4	31.9
Beans	27.5	29.4	27.6
Peas	26.9	27.5	24.8
	Tons	Tons	Tons
Potatoes	7.1	6.6	6.3

Agricultural Statistics of the Ministry of Agriculture for the year 1919, sets forth the evidence of this sample, which, it is stated, included "cases of total or partial failure" and was based on "estimates made by qualified persons."[1]

Of the newly plowed land, probably about 70 per cent was sown with oats and 15 per cent with wheat.[2]

There is, however, another side to the picture—the statistics of live stock. The most important figures are given in Table IV (thousands omitted). It will be noticed that, with the exception

TABLE IV

Year	Cows in Milk	Total Cattle	Sheep	Pigs
1913	1,707	5,717	17,130	2,102
1914	1,908	5,878	17,260	2,481
1915	1,882	6,064	17,523	2,420
1916	1,856	6,216	17,951	2,168
1917	1,831	6,227	17,170	1,919
1918	1,858	6,200	16,475	1,697

of cows in milk, the totals of all these classes of stock were lower in 1918 than in 1916, and that the cows in milk were fewer than they had been in 1914. Moreover the amount of food for live stock which was produced in 1918 is estimated to have been

[1] See Cmd. 680, p. 4.

[2] *Ibid.*, p. 5.

less than that produced in 1916 by more than two million tons.[1] Part of this last decline was, however, due to the accidents of the seasons, for the hay crop of 1916 was unusually good, while that in 1918 was deficient. And Lord Ernle has calculated that if these losses in fodder are converted into their equivalent in meat and are set against the gains in other directions, a comparison of the two years leaves us with a net gain of 3,294,000 tons of human food.[2]

There is, however, a sense in which the food-production campaign may be said to have disappointed its promoters. The original scheme which was submitted to the Cabinet in April, 1917, was for an addition of three million acres to the arable area of 1916, before the harvest of 1918. But the Cabinet did not consider the scheme until late in June. As Lord Ernle says, "precious months were lost," and partly because of this, partly because an increase of production was expected in Ireland and Scotland, the program was modified.[3] The revised program "provided for an increase in the tillage area of England and Wales of 2,600,000 acres, as compared with 1916, and it was estimated that 2,050,000 acres of permanent grass would have to be ploughed in order to obtain this result."[4] Even this modified scheme was not carried out. The total increase in the arable area was, as we have seen, less than 1,400,000 acres, and the total increase in the area under crops other than grass is put by Lord Ernle at "upwards of 1,950,000 acres."[5] Lord Ernle describes the chief factors which hampered progress in the following passage:

> One obstacle to the progress of the campaign was the difficulty of convincing farmers of the reality of the danger. Each delay, disappointment, failure, or modification of plans, however inevitable it might be, each acre

[1] See Lord Ernle's article, "The Food Campaign of 1916–18," *Journal of the Royal Agricultural Society of England*, LXXXII (1921), 35.

[2] See *ibid.*, pp. 36–37.

[3] See *ibid.*, p. 29.

[4] See *Report of the Director-General of Food Production* (1918), p. 6. *The Report of the War Cabinet for 1917*, however, describes the 1918 program as providing for "an increase in the arable area over 1916 of 2,700,000 acres in England and Wales." See Cd. 9005, pp. 158–59.

[5] See Lord Ernle, *Food Campaign of 1916–1918*, p. 32.

of land appropriated for aerodromes, was used as a proof that the position was safe. It not only encouraged farmers to hang back, but chilled the enthusiasm of the Executive Committees. From this point of view, the withdrawal of the 18,000 skilled ploughmen on May 10, 1917, the loss of the summer months, the delay in the sanction of the programme were serious and widespread in their combined effects. Still more paralysing was the comparative failure to supply the promised soldier labour. . . . . Almost equally great was the disappointment over the supply of tractors.[1]

In the spring of 1918 a new program was prepared for the forthcoming season. A million more acres of grass were to be plowed up. But this scheme was never submitted to the Cabinet. The German offensive, leading to further military demands upon the man power of the country and the withdrawal of large numbers of agricultural workers for military service, combined with other reasons to convince the Board of Agriculture that the proposed increase of tillage could not be carried out. In July, 1918, the program was abandoned, and Lord Lee, the Director of Food Production, resigned. Lord Ernle remarks that "two circumstances, the first of which was accidental—the foul weather of September and October, and the signature of the Armistice in November—subsequently justified the Board's decision." But he adds that "there were obvious risks in the abandonment of the programme as well as in its prosecution."[2]

It is scarcely possible to describe in a few words the main effects of all these agricultural changes upon the various classes of the rural population. There can be no doubt that the landowners suffered loss. A strong committee which was appointed by the Agricultural Wages Board in March, 1918, to inquire into the financial results of the occupation of agricultural land and the cost of living of rural workers, reported a year later that so far as evidence was available it tended to show: (1) that in the majority of cases changes of rental had only taken place on a change of tenancy; (2) that something like 25 per cent might be taken as the proportion of land subjected to rent adjustment since Lady Day, 1914; and (3) that in many cases, even where the rents had been raised, they had not reached the full competitive

[1] See *ibid.*, pp. 29–30.

[2] See *ibid.*, pp. 43–47.

value of the land.[1] Meanwhile, the upward rush of prices had enormously increased the cost of repairs, and though the full influence of this factor was not felt until after the conclusion of hostilities because shortage of labor and materials compelled the postponement of repairs which would normally have been undertaken, note was already taken in the above-mentioned report of the large quantity of land which was being sold.[2]

If landowners suffered, farmers undoubtedly prospered during the war. They had many difficulties to contend with, but their incomes increased. Though the régime of maximum prices, at least in the case of cereals and milk, prevented them from taking full advantage of the war-time market in the later stages of the struggle, and though the costs of production rose, prices were on the whole very remunerative. The fixed prices did not always operate to reduce profits. For example, the Secretary of the Ministry of Food (Sir William Beveridge) told the Royal Commission on Agriculture in 1919 that, in the case of potatoes, the farmer, at least in the year 1917, had "got money from the State which unquestionably he would not have got in the open market."[3] It must be remembered, too, that the farmer was exempt from the excess-profits duty. The fact that few English farmers keep adequate accounts and the spirit of secretiveness which is not uncommon among them makes it impossible to obtain comprehensive statistical evidence as to the degree to which their profits increased. But such facts as are available point to a very substantial improvement. The National Farmers' Union of England submitted to the Royal Commission some figures relating to a group of 78 farms with a total area of 33,531 acres.[4]

[1] See Cmd. 76, pp. 9–11. The diminishing proportion of the net returns received by the landlord of a farm in one of the Eastern Counties is shown by a graph in an article on "Farming Equipment and Finance" by C. S. Orwin and S. J. Upfold which is published in the *Journal of the Royal Agricultural Society of England*, LXXXII, 155.

[2] See Cmd. 76, p. 11. The accumulation of arrears of repairs was particularly disastrous for the landowners because building costs advanced rapidly after the armistice.

[3] See *Minutes of Evidence*, I (Cmd. 345), p. 103, question 2517.

[4] See *ibid.*, V (Cmd. 665), Appendices, p. 3.

The farms were divided into six classes according to size, and in the four classes which in 1913–14 showed an excess of receipts per acre over payments per acre, the balance per acre in the period 1917–19 showed an increase of 277 per cent, 229 per cent, 673 per cent, and 39 per cent respectively. In the two classes of farms which had adverse balances in 1913–14 deficits of 8/3 and 4/5 an acre were in 1917–19 converted into credit balances of 34/– and 12/–. Further light on the question is supplied by the *Report of the Committee of the Agricultural Wages Board* which has previously been quoted. The Committee remark that the material for a comparison between the pre-war position of farmers and their position during the war is scanty, but say "it all tends to the same conclusion, viz., that farming has been substantially more remunerative during the war than in the period immediately preceding it," while "it would appear that the year 1916–1917—i.e., the twelve months ending Lady Day, 1917—was that in which profits were largest." The Committee came to the conclusion that "the farmers' average pre-war net returns from farming were in the region of 9/– to 10/– per acre, and that in 1918 these had risen to about 34/– per acre," but they observed that the position had subsequently been changed "by the operation of the Agricultural Wages Board's awards, the full effect of which was not felt in the year 1917–1918."[1]

To the agricultural laborer the war brought an increase in wages and a reduction of hours, but it is arguable that an agricultural minimum wage might have been established if there had been no war, and that, though circumstances connected with the war emergency ultimately led to its establishment in 1917, the outbreak of hostilities actually postponed legislation. In the first years of the war wages rose sporadically and slowly; but a minimum wage of 25/– a week was made obligatory from the date on which the Corn Production Act came into force (August 21,

[1] See Cmd. 76, pp. 38, 40. For other evidence see the *Minority Interim Report of the Royal Commission on Agriculture* (Cmd. 473), p. 9, § 4, and the sections of the *Minutes of Evidence* there referred to. The contrast between the war period and the years immediately preceding the war shows itself in the statistics of farming bankruptcies. The total numbers of farming failures under the Bankruptcy and Deeds of Arrangement Acts were 245 in 1910, 305 in 1911, 336 in 1912, 326 in 1913, 189 in 1914, 132 in 1915, 78 in 1916, 65 in 1917, 30 in 1918.

1917), and the Agricultural Wages Board set up by that act had power to fix rates higher than the statutory minimum and was charged with the duty of fixing such minimum rates as would "secure for able-bodied men wages which, in the opinion of the Board, are adequate to promote efficiency and to enable a man in an ordinary case to maintain himself and his family in accordance with such standard of comfort as may be reasonable in relation to the nature of his occupation."[1] The first award made by the Wages Board—one for the county of Norfolk—came into operation on May 20, 1918. By the end of the year no English or Welsh county had a minimum rate of less than 30/– for an able-bodied male over twenty-one years of age, while in Cheshire, Durham, and Northumberland the minimum rate was 36/–, and, in Glamorganshire and Monmouthshire, 36/6. It was not, however, the high-wage counties which received the largest increases; and the committee appointed by the Wages Board reported in March, 1919, that a general result of the minimum wage had been "substantially to narrow the gap between the highest and lowest paid counties."[2] Including the value of allowances this committee estimated the average minimum rates of 1918 as 31/5 for ordinary laborers, and 38/1 for stockmen, or 33/– for all classes. These figures, as compared with the wages of 1914, were reckoned to represent a rise of 83 per cent for ordinary laborers, 103 per cent for stockmen, and 88 per cent for all classes. In the same period the expenditure of a farm worker's family on food, rent, fuel and light, clothes, insurances, and cleaning materials taken together was estimated to have increased 85 per cent.[3] "As a general statement," the committee observes, "it would be true to say that the minimum rates in 1918

[1] See 7 and 8 Geo. 5, chap. 46, § 5 (6).

[2] See Cmd. 76, p. 21. The desirability of such a leveling up of agricultural wages in the counties of low wages was urged by the present writer in 1914. See R. Lennard, *op. cit.*, p. 94.

[3] See Cmd. 76, pp. 24, 37. As regards the distribution of the net returns of farming, the article of C. S. Orwin and S. J. Upfold already cited contains the following statement with regard to the farm the accounts of which were analyzed: "The landlord's share declined steadily throughout the period, no increase in rent having occurred, and speaking broadly it may be stated that the farmer took his original share *plus* that which would have gone to the landlord on the previous basis of distribution, whilst labor continued to take the same proportionate amount as at the outset."—C. S. Orwin and S. J. Upfold, *op. cit.*, p. 154.

represent fewer hours of work than the wages quoted for 1914." No doubt the establishment of overtime rates tended to lessen the amount of overtime that was worked by making it costly to the employer. The establishment of extra rates for overtime also provided an instrument which at the end of the war was used as a means of securing a weekly half-holdiay (apart from Sunday) for the agricultural worker.[1] But the effects of the minimum wage extended beyond these more or less direct results of its enactment. Agricultural trade unionism was stimulated. As Mr. George Dallas, of the Workers' Union, said: "The need for representation on the bodies for fixing wages made organization essential."[2] The insufficiency of the figure actually named in the Corn Production Act to serve as an adequate minimum rate when the cost of living continued to rise increased this stimulus, for, as Mr. E. Selley says, "there is no doubt that the insertion in the Act of a paltry 25/– minimum drove thousands into Unions who

[1] I venture to quote some arguments in favor of this from the *Minority Report* which I addressed to the Minister of Reconstruction in November, 1918, as a member of the committee appointed by him to consider the employment of returned sailors and soldiers on the land. I had previously approached several members of the Wages Board in much the same sense: "A rigid law that there shall be a Saturday half-holiday is unthinkable in agriculture. Cows must be milked, horses must be fed, and in hay time and harvest a fine afternoon cannot be missed. A rule that some day in the week must be allotted each laborer for a half-holiday, while less objectionable from the farmer's point of view, would not meet the needs of the laborers. Either the men would keep holiday each on a different day, so that they could not combine for games, or there would be a tendency for the farmer to give all his men holiday on a day which was too wet for outdoor recreation. For cricket and football to prosper it is obviously necessary that the same day should be chosen for holiday making throughout the village, and in all the villages of the neighborhood, and that it should be known some time beforehand what that day will be. Only so can inter-village matches be arranged. Now all this can be obtained without undue disturbance of farming operations by a simple wage regulation. If the Wages Board requires overtime rates—say, time and a half rates—to be paid for all work done in excess of five hours on Saturday or on some other stated day of the week, the result will be that only really urgent work will be done on the afternoon of that day, and the men who can be spared will be spared, while at the same time the law will have all the elasticity which agriculture requires because of its dependence on wind and weather."—*Report of the Committee of Section IV of the Advisory Council* (1919), p. 39.

[2] See E. Selley, *op. cit.*, p. 161. Mr. Selley also quotes the opinion of Mr. R. B. Walker, the general secretary of the National Agricultural Laborers, and Rural Workers' Union, to the effect that the Corn Production Act had "undoubtedly provided an incentive to the laborer to organize."

might not have joined had a really adequate minimum been provided." In July, 1919, Mr. Selley estimated that nearly 250,000 farm workers were subscribing to one or other of the several unions for which they are eligible.[1] Probably the minimum wage and other influences springing from the arrangements and legislation of the war period were the chief causes of the growth of organization which showed itself among the farmers at this time. The agricultural employers as well as their employees extended their organization.[2] And the Wages Board brought the representatives of both sides together, with a notable effect in increased mutual knowledge and respect. This wholesome development was assisted in no small degree by the formation in March, 1918, of the Agricultural Club, under the genial presidency of Sir Henry Rew. The object of the club was "the discussion of subjects relating to agricultural and rural development." Members of the Wages Board and officers of the Board's staff, and subsequently members of the various District Wages committees, were eligible for membership of the club without election, and in addition other persons might be elected by ballot, though the total number of persons so elected was not to exceed twenty. The club usually met on the evenings before the meetings of the Wages Board, and its distinctive characteristic, as Sir Henry Rew remarks, "was that farmers and agricultural laborers were placed on an absolute equality."[3] The happy results have been described by Lord Bledisloe. He writes:

> On many a chilly winter's evening, illuminated and warmed by two great fire-places and the often unvarnished rhetoric and scathing sallies of bucolic orators of very varying political views and social experience, the owner of many broad acres, the tenant farmer of wide agricultural experience and renown, and the industrious and independent farm worker, living in and loving (as only an English agricultural worker can) his humble, creeper-clad cottage home, could have been seen filling their pipes from the same tobacco-pouch and enjoying each other's company in an unaffectedly congenial atmosphere.[4]

[1] See E. Selley, *op. cit.*, pp. 163–64.

[2] The declared membership of the National Farmers' Union increased from 22,674 in 1916 to 27,001 in 1917, 51,368 in 1918 and 72,036 in 1919.

[3] See R. Henry Rew, *The Story of the Agricultural Club, 1918–1921* (1922), p. 4.

[4] See *ibid.*, Foreword by Lord Bledisloe, p. xiii.

It would be fitting to conclude a sketch of English agricultural history during the war with a general judgment upon the system of state control which was set up under the pressure of war-time necessities. One would like to estimate its efficiency for the immediate purposes of war and discover any lessons of permanent value which the experience of the period might suggest. But the history is baffling to a degree. In the whirlwind of violent and conflicting forces, with naval, military, political, and financial factors all changing from day to day and each influencing the agricultural situation, it is difficult to trace even the more important causes of the most striking changes. What shall we say was the real cause of the great extension of the arable area which took place in 1917 and 1918? Given the system of maximum prices and the insistent demand of the War Office for men, there can be little doubt that vigorous action on the part of the state was necessary for the development of food production. The Board of Agriculture and the Food Production Department had to protect agriculture against other departments of state. But if it had been politically possible or socially desirable to leave the farmer to get the best price he could, and if a sufficient supply of labor had been left on the land, would the ordinary economic motives have induced an extension of corn-growing similar to that which was actually brought about by state interference? May we conclude that the history of 1915 and 1916 reveals so much inertia in the farming community that nothing short of state control could be expected to produce the necessary activity? Is this conclusion seriously shaken by the fact that the rise in cereal prices did not become revolutionary in character until the autumn of 1916? Even more hesitating must be our answer to questions regarding the relative importance and efficiency of the various instruments employed by the state in the food-production campaign. Did the guaranteed prices of the Corn Production Act affect the course of events to an appreciable extent? The guaranties never became operative; but it might be argued that they gave the farmer some security against the possibility of a sudden fall in prices.[1] Was

[1] When Sir Daniel Hale of the Board of Agriculture was giving evidence before the Royal Commission of 1919 he was asked, "Do you think that the

the really effective force the power to issue plowing orders which was derived from the Defence of the Realm Act? How much would have been accomplished if the action of the state had been limited to negotiation with the War Office for the supply of soldier labor and of the labor of prisoners, and to measures for the provision of tractors and fertilizers? Finally, what must we say of the general lessons to be derived from the history of the war in regard to the desirability of state interference with the conduct of the agricultural industry? On the one hand, it must be remembered that during the war everything had to be done in a hurry, and that newly enrolled officials had to undertake work which was almost entirely strange to them and in regard to which little experience was available. A permanent peace-time policy would be enforced by trained officials, and its administration would grow richer in experience from year to year. On the other hand, it is equally true that patriotism and a spirit of willing helpfulness pervaded all classes in the period of national emergency: in such a time of crisis people were willing to put up with restraints and inconveniences which normally they would not endure for a moment. When the country is no longer "a beleaguered city," the average Englishman begins once more to think that his home is his castle. On one minor point, perhaps, a definite conclusion may be reached. Maximum prices which are lower than market prices must tend to impair the *quality* of agricultural products. The farmer will be able to obtain the maximum price for goods of inferior quality, and he can get no more in any case. He will therefore become indifferent to quality.

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guaranteed prices as a policy have really stimulated corn production in this country?" He replied: "Certainly not. I should say not, because they have never been in operation. You see the actual prices that have prevailed since the Corn Production Act was passed have been a long way above the guarantees of the Corn Production Act, and a long way below the world's market prices. The world prices, for instance, in 1918 for wheat would be over 100/– instead of the 75/– that we have been tied to." See Cmd. 345, p. 11, qu. 220.

THE IRON AND STEEL INDUSTRY OF JAPAN AND JAPANESE CONTINENTAL POLICIES

Political policies are usually shaped by economic forces. They may be, and in most cases are, the resultant of several industrial influences working toward certain general but often ill-defined ends. Not infrequently, however, a single industry or class of industries may be the sole or main determinant of political action. The power of such an industry in shaping a political program generally results from either its great predominance over all other interests or its importance in relation to national defense. Indications point to the latter influence as the dominant factor in certain phases of trans-Pacific politics.

The iron and steel industry of Japan is closely bound up with that country's continental policies. Military power is dependent upon this industry, and the political situation in the Orient will be better appreciated as the conditions governing Japan's iron and steel industry are understood. The mainspring behind this branch of manufacture is the government itself. This close association between political authority and the manufacture of iron and steel, due to the obvious relationship of the industry to the development of a military establishment, grew out of a similar relationship between the manufacture of arms and the old oligarchical government which existed in the feudal times of Japanese history.

One difficulty in the study of this industry in the Orient is the fragmentary and uncertain data available. Published statements are often little more than guesses based upon superficial observations and imperfectly compiled government statistics. The latter are frequently not clear as to the kind of material and areas covered. This is especially true of production statistics. Figures therefore must be quoted with considerable reserve.

Official statistics, however, of great value and reliability exist with reference to imports, exports, and a part of the iron and steel output. In some instances figures are published concerning both the capacity and output of individual works and mines. Of considerable importance in determining the true situation of the Japanese iron and steel industry are geological surveys which have been made concerning the iron ore and coal reserves of Eastern Asia—tolerably complete for Japan and Korea, but rather fragmentary for China. From these sources fairly reliable data are obtainable for forming some estimate of the position of the country with respect to the manufacture of iron and steel and its significance in connection with Japanese continental policies.

THE GENERAL SITUATION

Japan proper is far from being self-sufficient in the essentials of iron and steel manufacture as carried on under modern conditions. The annual production of pig iron amounts to only a few hundred thousand tons, and the major part of this iron is smelted from foreign ores. The steel output is appreciably greater, and is likewise largely manufactured out of imported pig iron and scrap. While Japan exports more coal than it imports, the native coal is not generally suitable for coking purposes, and hence the country is dependent upon foreign sources for its supply of coke and coking coal. In certain raw materials used in the production of alloy steel, like chromite, Japan is moderately well endowed. In the great basic materials, however, which are necessary for a large tonnage output its natural resources are limited.

The consumption of steel in Japan vastly exceeds its production, and hence much steel is imported. The greater part of this imported material comes in the forms of steel plate and steel bars, rods and structural shapes. These forms are used largely in the building of ships, although much of this and similar material is employed in other industrial lines.[1]

The large importation of iron ore, coking coal, and pig iron shows that at the present time the steel industry of Japan

[1] Figures regarding production and imports are given below.

rests upon a rather unstable basis. The dependence of the country upon foreign steel also indicates that the handicap of inadequate supplies of native raw material is sufficient to keep the cost of steel manufacture at a relatively high point. Notwithstanding these drawbacks, the Japanese iron and steel industry has shown considerable progress during the past two decades and especially during the world-war. The largest producer in the country is the Imperial Steel Works located on the island of Kyushi near the ports of Wakamatsu and Moji. These works are owned and operated by the Japanese government. In addition to this government enterprise are several independent concerns—most of them small and devoted to the manufacture of foundry products, but a few of considerable size and engaged in producing tonnage[1] steel.

By far the greater part of the Japanese output of steel, and probably of pig iron, is manufactured in Japan proper. In recent years, however, there has been some movement of Japanese steel plants and foundries to the continent. While the present industrial depression has called a halt to this tendency, it is not improbable that in the near future this movement will again proceed. It is this development and the conditions producing it which are so significant for the politics of the Far East. A proper presentation of the iron and steel situation in Japan in its economic and political relations includes a consideration of the iron-ore and coal resources of Japan, Korea, Manchuria, and China proper, the production and consumption of iron and steel in Japan, the organization of the Japanese industry, and the Japanese "sphere of influence" on the Asiatic continent.

IRON-ORE AND COAL RESOURCES

The development of the iron and steel industry of any country is intimately related to the extent and character of its

[1] The term "tonnage" in the steel trade signifies large-scale or mass production. Tonnage steel includes such products as rails, structural shapes, plates, black sheets, wire rods, and the like, and is distinguished from high-grade carbon and alloy steel, which is used in the manufacture of high-priced cutlery, watch springs, expensive machine parts, and similar articles. The former is usually sold and quoted by the ton, and the latter by the pound.

iron-ore and coal reserves or those of adjacent territories. Cost of transportation is an important item in the expense of manufacturing pig iron wherever any considerable haulage is necessary in the assembling of raw material. Hence the production of iron and steel on any large scale must take place in regions not too remote from ample supplies of ore and coal.

The iron-ore and coal resources of the greater part of Eastern Asia are still very imperfectly known. In the case of Japan and Korea geological surveys have been fairly thorough, particularly in that of the former. The same can now be said, though to a less extent, of southern Manchuria. Except in a few regions where mining operations permit geological surveys in China have been much less carefully made.

The Executive Committee of the eleventh International Geological Congress, which met in Stockholm, Sweden, in 1910, prepared a report dealing with the iron-ore resources of the world. This report is still the basis used for estimating the reserves of different countries, although later geological surveys have in many instances altered the earlier figures. The estimates given in the report for Japan, China, and Korea are shown in Table I:[1]

TABLE I

IRON-ORE RESOURCES OF JAPAN, CHINA, AND KOREA

Country	Variety of Ore	Actual Ore Supplies* (in Million Tons)	Equivalent Metallic Iron (in Million Tons)	Potential Ore Supplies*
Japan	Magnetite, Hematite, Limonite	55.6	28.0	Moderate
China	Hematite	100.0	60.0	Probably enormous
Korea	Magnetite, Hematite, Limonite	4.0	2.0	Probably moderate

* The term "actual" is used to signify proved and commercially valuable ore. "Potential" is the word employed to designate ore supplies which under present conditions cannot be profitably exploited because of low iron content, unfavorable location with respect to means of transportation, or deleterious ingredients. In the case of the three countries mentioned "potential" is also applied to deposits known to exist but not yet surveyed.

The foregoing estimates have not been changed materially, so far as Japan is concerned, since the report was published.

[1] International Geological Congress, *Iron Ore Resources of the World*, I, lxxviii.

It will be seen that Japan was credited with actual or commercially valuable iron-ore reserves amounting to 55,600,000 tons. In an ordinary good year the iron-ore production of the United States amounts to more than 60 million long tons,[1] and hence the Japanese reserves of commercially valuable iron ore are less than one year's output in this country.

The iron-ore reserves of China are still very imperfectly known. In many localities of this country iron ore is mined under primitive conditions. In the case of most other metals it has been found by experience that only those localities which have been previously worked by natives are likely to prove of value when developed on a more modern scale, and consequently a complete knowledge of the native workings may be assumed to cover the larger part of what is likely to prove of value in the future. The converse of this statement is true with respect to iron ore. When it comes to establishing modern blast-furnace plants it is likely to appear that the fuel suited to primitive methods is not suited to blast-furnace practice, and the ores of which a few tons at most were extracted daily with prodigious labor are neither of requisite richness nor sufficiently abundant to meet the new demands upon them. Hence, the modern iron industry is likely to develop in regions independent of its forerunners.

Estimates of the actual iron-ore reserves of China, if made today, would in all probability greatly exceed those of the eleventh session of the International Geological Congress. A very large allowance, however, would still have to be made for potential supplies. In the report of the Congress no estimate of the actual ore reserves of Manchuria is given distinct from those for China as a whole. Recent estimates of these reserves range from 80 million to 250 million tons, but these figures, especially the latter, include much that would be designated in the above-mentioned report as "potential" supplies.

The figures given for Korea are smaller than the "actual" deposits now known. In recent years Korea has been supplying Japan with ores ranging in amount from 150,000 to 350,000

[1] *Annual Statistical Report of the American Iron and Steel Institute*, 1920, p. 58.

metric tons annually. In addition there has been a not inconsiderable consumption of ore in blast furnaces within the country itself. The iron-ore reserves of Korea, while larger than the estimates of a decade ago, are limited compared with those of Manchuria and certain provinces of China.

The principal iron-ore deposits now being worked in Japan are in the northern and central parts of the island of Honshu and the southwestern part of Hokkaido (formerly called Yezo) near the shores of Volcano Bay. By far the largest deposit in the empire is that of Kamaishi in the province of Rikuchu. This deposit was estimated by the International Geological Congress of 1910 to amount to 47,428,731 metric tons, all magnetite. Hematite deposits estimated at about four million tons exist in the provinces of Rikuchu and Echigo. Ores in the forms of limonite and iron sand also exist in the empire, but the former are in very limited amounts.[1]

In China iron ores have been mined in large amounts at points along the Yangtze River. At Hanyang just across the Han River from Hankow, in the province of Hu-pei in the central part of the country, is located the plant of the Han-Yeh-Piang Iron and Steel Company, whose principal ore properties are located at Tai-Yeh, some fifty miles to the southeast and about fifteen miles west of the Yangtze River. The ores mined by this concern are hematites of high grade (containing from 60 to 62 per cent metallic iron). In the Kiang-Su province iron ores are widely distributed, occurring chiefly in the region about Nanking in association with limestone. In general chemical and physical character these ores are much like those of Tai-Yeh.[2] The fact that the ores in both these regions are conveniently

[1] International Geological Congress, *Iron Ore Resources of the World*, II, 927–65. See especially pp. 931–33. The terms magnetite, hematite, and limonite represent certain chemical and mineral differences in iron ore. While in chemical composition magnetite is the purest form of iron ore, many available ores carry sulphur, phosphorus, titanium, and other elements which limit their usefulness. Hematite (red hematite) constitutes the bulk of the iron ore of the United States, and is the principal ore from which steel is made. Limonite is a term used to cover hydrated hematites. Few of these ores are sufficiently free from phosphorus to be within the Bessemer limit, necessary for high-grade steel.

[2] International Geological Congress, *Iron Ore Resources of the World*, II, 915–24.

adjacent to the Yangtze River facilitates shipment to Japanese steel works, a large part of the Japanese importations coming from this section.

Iron ores, largely hematite, are found in the provinces of Chihli, Shansi, and Shantung. Large ore deposits also exist in Manchuria, although several of these contain ores of low grade which can be profitably smelted in this region on account of the close proximity of good coking coal but cannot be profitably shipped to Japan. Indications point to large ore reserves in Mongolia, but in the absence of good transportation facilities and because of their location little definite information is obtainable concerning their extent.[1]

In Korea the iron ores are chiefly limonite. There are, however, some deposits of hematite and magnetite. The workable deposits average about 50 per cent metallic iron and are readily mined. While not enormous in amount they are capable of supplying the Imperial Steel Works of Japan and blast furnaces in Korea itself for several years to come.

In the manufacture of steel, coal is important. The consumption of coal in the manufacture of steel in its more advanced forms will often amount to three or four times the weight of the steel itself. In the manufacture of pig iron the amount of coal in the form of coke is approximately equal to the pig iron produced. In other words in producing a ton of pig iron two tons of high-grade iron ore (metal content approximately 50 per cent) and one ton of coke are ordinarily used.

The coal employed in the manufacture of both pig iron and steel is generally bituminous. It is bituminous coal out of which coke is manufactured. Not all kinds of bituminous coals are good coking coals. Whether or not a coal is good coking coal depends partly upon its chemical constituents and partly upon its physical properties. The coal generally employed in blast furnaces and steel works at the present time is coal belonging to the Paleozoic and Mesozoic deposits. More recent deposits of coal are usually of a sub-bituminous or lignite variety and are not generally suitable for coking purposes and often not for steel manufacture.

[1] *Ibid.*, pp. 915 ff.

In 1913 the International Geological Congress made an estimate of the coal reserves of the world similar to that made of iron ore in 1910. The coal resources of Japan, China, Korea, and Manchuria were estimated by that body as follows:[1]

TABLE II

Country	Actual Reserves (in Million Tons)			Probable Reserves (in Million Tons)			Total
	Class of Coal						
	A	B and C	D	A	B and C	D	
Japan	5	C 896	67	57	6,234	711	7,970
China (proper)	8,883	9,783	.....	378,581	597,740	600	995,587
Korea	7	1	5	33	B 4 C 9	22	81
Manchuria	.....	B 31 C 378	.....	68	B 223 C 508	.....	1,208

In the foregoing tabulation the coal is divided into four general grades, A standing for anthracite, B for high-grade bituminous, C for low-grade bituminous and sub-bituminous, and D for lignite or brown coal. The figures for the "actual" and "probable" reserves are estimates based upon the degree of exactitude in making measurements. Thus "actual" reserves include all deposits in which the calculations of the amount are based upon a knowledge of the actual thickness and extent of the coal seams, while the "probable" reserves include deposits of which only an approximate estimate can be made.

The coal supply of Japan was estimated by the International Geological Congress at 7,970,000,000 metric tons. In addition to this amount there are other possible reserves of which no estimate has yet been made. There is practically no coal in Japan belonging to the Paleozoic era and only a small amount assigned to the Mesozoic (mostly Triassic and Cretaceous). The great bulk of the Japanese coal is Tertiary, chiefly Miocene. This material is only to a limited extent suited for iron and steel manufacture, and practically none of it makes good coking coal. While Japan exports more coal than it imports, the country is

[1] International Geological Congress, *The Coal Resources of the World*, I, xxx and xxxi.

obliged to rely in large measure upon foreign product for smelting and steel-making purposes. This coal comes mainly from Northern China and Korea.[1]

Coal is widely distributed over China. The greater part of the known Chinese reserves are in two extensive areas, one in Northern China covering a large percentage of the province of Shansi and the other in the south extending over southern Hunan, Kueichou, Yunnan, and Szechuan. In addition to these large deposits there are other considerable supplies in the province of Chihli (in which Peking is located), in Shantung, and in other provinces.[2]

China is well supplied with both anthracite and high-grade bituminous coal. Much of the latter is excellent coking coal. Some of the deposits of China are at present rather inaccessible, but several are within the easy reach of Japanese iron and steel manufacturers. Among the coking-coal fields of China now largely subservient to the industry of the Island Empire are those of Pei-Piaw, located twenty-seven miles northeast of Chao-Yang; Fu Kai P'ing, about seventy-five miles northeast of Tientsin and served by a railroad; and Chiang-Hsing-Hsien, all in the province of Chihli; Yi Hsien, in the extreme south of Shantung; and Lien Chow, in the province of Kwantung. At the present time the coal fields of Chihli are the ones within China most likely to continue to supply Japan with coking coal.[3]

The coal-mining industry of Korea dates from a relatively remote period—even antedating that of Japan. The Phyong Yang field has been the principal seat of Korean production. Much of the coal mining is still conducted in a small way and by primitive methods. Most of the Korean coal belongs to the Mesozoic era and some of it is excellent coking coal.[4]

In Manchuria coal occurs in the Carboniferous, the Jurassic, and the Tertiary strata. Although there are great reserves of the first, the Fu-Shun Valley, which contains the most important mining area at present, is mainly Tertiary. Some of the thickest

[1] *Ibid.*, pp. liv, 281–347.

[2] *Ibid.*, p. xxx. See tabulation of reserves by provinces.

[3] *Ibid.*, pp. lii, liii, 159–237. [4] *Ibid.*

coal seams of the world are located in Manchuria. The deposits now being worked do not supply much good coking material, but there is evidence of excellent coking coal in the Carboniferous deposits.[1]

While iron-ore and coal deposits are the principal geographical factors in the development of the iron and steel industry, other resources influence the line of steel manufacture. The production of alloy steels is becoming more important each year, and from a military standpoint is essential in the manufacture of suitable and adequate ordnance material and equipment. Deposits of minerals used for the production of metal for alloying purposes will contribute to the growth of alloy-steel manufacture.[2]

Japan has some manganese ores, and in 1918 mined over 54,000 gross tons of this material. There are also deposits of molybdenite and tungsten-bearing ores. The country's output of the latter in 1918 was over 600 gross tons. Japan's situation, too, with respect to the newly opened-up deposits of tungsten-bearing ores in China practically assures producers of "high-speed steel" in the Island Empire abundant raw material. Chrome ore, or chromite, also exists in appreciable quantities. As a result of natural resources and situation the manufacture of alloy steels has progressed to a considerable extent in Japan.[3]

[1] International Geological Congress, *The Coal Resources of the World*, pp. liii, 239–97.

[2] Some of the most important of these alloying metals are manganese, chromium, tungsten, molybdenum, and vanadium. The first is essential in the manufacture of any steel made by the Bessemer or open-hearth process. It toughens steel, and when added in amounts of 12 to 15 per cent, contributes greatly to its wearing qualities. Chromium hardens steel and is used in the manufacture of armor plate, projectiles, and the like. Tungsten when added to steel in sufficient amounts—from 14 to 18 per cent—gives the metal the quality of maintaining its temper at red heat. This quality, useful in industrial life in the manufacture of parts for engines and other machine equipment, is of supreme importance in the rapid production of cannon and other war material. It is this "high-speed steel," as it is called, that made possible such a large consumption of ordnance material during the world-war. Vanadium and molybdenum increase the resistance of steel to repeated shock and are therefore much used in the manufacture of automobile steels.

[3] *Thirty-fifth Statistical Report of the Department of Agriculture and Commerce, Japan*, p. 417.

Connected with the growth of alloy-steel manufacture is the utilization of water power. Most alloy steels are produced in electric furnaces, and the cost of hydroelectric power is a large item in the total expense of manufacture. While water power is not a raw material in the same sense that ores and coal are, it performs the same function in the operation of electric furnaces that coal and coke do in blast furnaces and steel works. Japan is well endowed with water-power resources and the utilization of hydroelectric power in the manufacture of high-grade carbon and alloy steels promises to be a feature of the further development of the steel manufacture of the country.

PRODUCTION AND CONSUMPTION OF IRON AND STEEL

As already indicated the statistics of iron and steel production in Japan are vague and not entirely consistent with published government trade data.[1] Speaking generally, however, the figures concerning output for Japan proper show a very limited iron-ore production, an annual pig-iron output ranging in recent years (1916–20) from less than 100,000 metric tons to about 500,000 tons, and a steel production varying from less than 300,000 to approximately 1,000,000 metric tons. The heavy importation of steel revealed by trade statistics shows that steel consumption is much greater than steel production.

The domestic output of iron ore in each of the years 1918 and 1919 amounted in round numbers to about 135,000 metric tons, or, more specifically, the metallic content of this ore was 82,010 tons in 1918 and 81,175 tons in 1919.[2] Considerably over 80 per cent of this production came from the mines of Kamaishi, in the province of Rikuchu.

The leading producers of steel in Japan rely wholly or for the most part upon imported ore. The Imperial Steel Works, the largest plant in the country, uses very little native ore. The

[1] The figures for iron ore are an exception to this statement.

[2] *Twentieth Financial and Economic Annual of Japan*, 1920, p. 54. The statistics are here given in terms of metallic (pig) iron. As the greater part of this ore was magnetite with a very high iron content the computation of ore tonnage is made on the basis of 60 per cent metal production.

imports of iron ore for the years 1917 to 1919, inclusive, by principal countries of origin, are as follows:[1]

TABLE III

IMPORTS OF IRON ORE INTO JAPAN PROPER, 1917–19

COUNTRIES	1917		1918		1919	
	Quantity (Metric Tons)	Value (Yen)	Quantity (Metric Tons)	Value (Yen)	Quantity (Metric Tons)	Value (Yen)
Korea	121,034	960,895	236,565	4,881,525	337,854	6,980,799
China	295,982	2,382,011	359,629	9,601,071	595,023	15,331,000
Kwantung province	.....	.....	180	2,000	5,459	205,000
Australia	1,140	73,000	1,020	69,000	.....	.....
Philippine Islands	.....	.....	.....	.....	20,456	602,000
All Others	60	4,000	60	1,000	.....	.....
Total	418,216	3,419,906	597,454	14,554,596	958,792	23,118,799

The total imports of iron ore, including those from Korea,[2] from 1917 to 1919, inclusive, amounted each year to several times the domestic production. In 1919 they were approximately seven times the home output. The great bulk of this ore comes from Korea and China. Nearly all the Chinese ore is shipped from the central part of the country—principally from the Yangtze Valley. Little or none is imported from Manchuria, which is known to have large deposits. Manchurian ore, however, will in all probability be smelted on the mainland, where the close proximity of coking coal will make blast-furnace operation more economical than in Japan proper.

With an annual domestic production of about 135,000 tons and imports in recent years from 400,000 to about 950,000 tons the annual consumption of iron ore in Japan ranges from a little over half a million tons to nearly 1,100,000 tons. As government figures show practically no exportation of iron ore and the iron content of the imported material would probably average not less than 50 per cent, the pig iron produced each

[1] *The 1919 Annual Return of the Foreign Trade of the Empire of Japan*, Part I, pp. 389 and 390 and Part II, p. 391. The iron-ore statistics are given in piculs in Japanese reports but are here reduced to metric tons. A picul equals 133⅓ pounds.

[2] For present purposes Korea (Chosen) is treated as foreign territory. In Japanese official publications Korea, of course, is made a part of the Empire of Japan.

year from this supply would range from about 250,000 to over 550,000 tons.[1] Government figures regarding pig-iron and steel production in Japan are much smaller than this assumed output.[2] It is fair to suppose that much of the iron and steel production of the country is not publicly reported.

Before discussing the pig-iron output and consumption some consideration should be given to coal. The use of coal in iron and steel manufacture is, of course, only one of several uses. It is, however, an important one. A recent estimate of the amount of coal required in this branch of the industry in Japan for the year 1920 to smelt a computed output of 377,616 tons of pig iron and make 1,031,550 tons of steel was 6,040,000 tons.[3]

The country's production of coal for the years 1917 to 1920, inclusive, was as follows:[4]

TABLE IV

PRODUCTION OF COAL IN JAPAN, 1917–20

Years	Quantity (Metric Tons)	Value (Yen)
1917	26,361,420	140,009,591
1918	28,029,425	286,032,425
1919	31,271,092	442,540,941
1920	29,245,384	418,075,754

As already stated, very little of the Japanese coal is suited for the manufacture of coke. Hence much coking coal and some coke are imported. The imports of coal and coke by countries for the years 1917–19 are shown in Table V on page 636.[5]

[1] The amount of iron ore used in the manufacture of certain chemicals, pigments, etc., is so small as not to affect this calculation. Furthermore, no allowance for metallic losses is required in present-day blast-furnace practice in the case of iron, as is necessary with many other metals.

[2] See below for published figures on pig-iron and steel output.

[3] *Iron and Coal Trades Review* (London) (February 11, 1921), p. 207.

[4] *Twentieth Financial and Economic Annual of Japan*, 1920, p. 52, and *Board of Trade Journal*, September 15, 1921.

[5] *The 1919 Annual Return of the Foreign Trade of the Empire of Japan*, Part I, p. 388.

TABLE V

IMPORTS OF COAL AND COKE, 1917–19

	1917		1918		1919	
	Quantity (Tons)	Value (M. Yen)	Quantity (Tons)	Value (M. Yen)	Quantity (Tons)	Value (M. Yen)
Coal:						
China	485,693	5,438	534,512	9,615	463,298	11,251
Kwantung province	124,107	1,833	135,388	3,274	124,427	3,548
British India	4,030	40	.....	.....	150	3
French Indo-China	93,561	1,725	89,876	2,759	106,803	3,699
Asiatic Russia	.....	.....	4,552	107	4,962	84
Totals,* except Korea	707,421	9,038	761,698	15,763	699,646	18,588
Korea (Chosen)†	123,812	1,006	107,762	2,047	89,023	2,672
Totals for coal, including Korea	831,233	10,044	869,460	17,810	788,669	21,260
Coke:						
China	44,162	1,310	74,709	3,011	24,271	1,101
Kwantung province	7,284	297	2,230	99	1,840	72
Total* for coke	51,451	1,608	77,029	3,110	26,111	1,263

* Totals in Japanese trade figures are often larger or smaller than the sums of their items.

† In the *Financial and Economic Annals of Japan* the output of Japan does not include that of Korea, and hence the shipments from Korea to Japan proper are added in this table as imports.

The great bulk of the imported Chinese coal comes from the northern provinces. In the year 1919 out of a total of 463,298 metric tons (barring 124,427 tons imported from the Kwantung province) 423,988 tons came from Northern China. This last figure does not include the comparatively small importation of 37,030 tons derived from Manchuria.[1]

The bulk of the imported coal is needed for metallurgical purposes, particularly blast-furnace operation and steel manufacture. It is significant that this imported fuel comes largely from regions where coking coal is mined.

Japan, while a large importer of coal, is a still larger exporter. In 1919 the exports of lump coal, excluding shipments to Korea, aggregated 1,686,621 tons, and those of coal dust 314,076 tons.[2] The coal shipments to Korea the same year amounted to 333,981 tons.[3]

The output of pig iron and steel is stated variously by different authorities, but all agree in giving a much larger

[1] *The 1919 Annual Return of the Foreign Trade of the Empire of Japan*, Part II pp. 32–33.

[2] *Ibid.*, Part I, p. 287. [3] *Ibid.*, Part II, p. 387.

tonnage to steel than to pig iron. The variation in the case of pig iron is partly accounted for by the practice of some authorities in Japan of tabulating as pig iron only that part of the product of the blast furnace which undergoes no further chemical change into steel or wrought iron. The pig-iron output in such cases is thus stated in terms of material destined for transformation into iron castings, but does not include the larger tonnage used in the manufacture of steel. This supposition, however, does not entirely clear up the ambiguity of government statistics. The differences in official statistics concerning steel production are quite as marked as in the case of pig iron.

The output of pig iron in Japan proper for the years 1913 to 1919, inclusive, as published by the most frequently cited official authority and supplemented by the figures of the London *Board of Trade Journal* for the year 1920, is as follows:[1]

TABLE VI

PRODUCTION OF PIG IRON IN JAPAN (OFFICIAL FIGURES), 1913–20

Years	Quantity (Metric Tons)	Value (Yen)
1913	56,757	2,552,245
1914	74,179	2,742,223
1915	65,092	2,497,130
1916	86,157	4,691,808
1917	122,997	12,073,980
1918	181,246	38,091,576
1919	209,723	38,872,446
1920	168,729	19,882,076

The figures published by the Department of Agriculture and and Commerce in Japan are somewhat smaller than those just tabulated, but the difference is not material.[2] The *Japan Year Book*, on the other hand, gives figures, based partly on estimates, greatly in excess of the two authorities cited. According to

[1] *Twentieth Financial and Economic Annual*, 1920, p. 280. The quantity of pig iron is given in the *Annual* in units of kwan (8.28 lbs.) which are reduced in the table to metric tons.

[2] *Thirty-fifth Statistical Report of the Department of Agriculture and Commerce of Japan*, 1918, pp. 416–17. An interesting feature of these figures is that they segregate the outputs of the Imperial Iron (Steel) Works and of independent concerns.

this publication the pig-iron output of Japan proper, Korea, Manchuria, and China for the years 1915 to 1919 is shown in the following table.[1]

TABLE VII

PRODUCTION OF PIG IRON IN JAPAN AND CHINA, 1915–19, ACCORDING TO THE *Japan Year Book*

(In Units of 100 Tons)

Years	Japan Proper	Korea	Manchuria	China	Total
1915	345.6	.....	30.0	200.0	575.6
1916	491.0	.....	35.0	200.0	726.0
1917	539.9	.....	70.0	200.0	809.9
1918	541.6	100.0	230.0	480.0	1351.6
1919	541.6	100.0	230.0	480.0	1351.6

In the foregoing tabulation the figures for the countries on the Asiatic mainland are obviously rough estimates. Those for China probably include the output of companies which are not entirely under Japanese control. It will be observed that the production of Japan proper is from two and one-half to over five times that given in the leading official publications.

Some years ago a financial and economic committee was appointed by the Japanese government to investigate the future development of the national iron and steel industry. This committee published a report containing the estimated output for the years 1920 to 1924, inclusive, as follows:[2]

TABLE VIII

ESTIMATED PRODUCTION OF PIG IRON IN JAPAN, 1920–24

Year	Tons
1920	377,616
1921	468,000
1922	437,000
1923	466,000
1924	492,000

The foregoing figures were based upon a careful study of the Japanese iron and steel industry and probably give a more

[1] *Japan Year Book*, 1919, 1920, pp. 561–62.

[2] *Iron and Coal Trades Review* (London, February 11, 1921), p. 207; *Commerce Reports* (July 7, 1921), p. 101.

accurate picture of the present-day production of pig iron in Japan than any other data available. Being much larger than the figures published by the ordinary government agencies above indicated they are more consistent with what we know of the character and amounts of the ore produced in Japan or imported from the Asiatic mainland without having the appearance of mere guesswork so characteristic of many given in current commercial journals.

In addition to the pig iron smelted from native and foreign ore there is a considerable tonnage of pig iron imported. Tabulated by countries this importation for the years 1917–19 is as follows:[1]

TABLE IX

IMPORTS OF PIG IRON, 1917–19

COUNTRIES	1917		1918		1919	
	Quantity (Metric Tons)	Value (1,000 Yen)	Quantity (Metric Tons)	Value (1,000 Yen)	Quantity (Metric Tons)	Value (1,000 Yen)
China	109,747	9,337	157,716	41,814	95,171	16,287
Kwantung	26,985	4,572	24,877	8,378	62,773	11,717
British India	61,108	5,318	7,052	911	28,854	4,744
Great Britain	5,461	625	17,843	3,877	44,753	9,128
Sweden	3,745	708	4,216	1,034	10,782	2,761
United States	24,811	3,224	13,008	2,998	35,554	6,291
Australia	.....	.....	.....	.....	4,596	1,062
All Others	350	64	345	80	628	155
Total	232,207	23,848	225,057	59,092	283,111	52,145

It will be observed that during the three years mentioned Japan imported between 225,000 and 285,000 tons annually. Considerably over half came from China (including the province of Kwantung). As practically no pig iron is exported this material, added to the officially reported output, if government figures were reliable, would give the country's approximate consumption. As a matter of fact the actual consumption of pig iron in Japan upon the basis of published import figures for both iron ore and pig iron and the known production of native ore is considerably larger. In the year 1919, for example, with an assumed metallic content for native and imported iron ore which was probably

[1] *The 1919 Annual Return of the Foreign Trade of the Empire of Japan*, Part I, p. 290.

less than its actual amount[1] this raw iron exceeded by about 50,000 tons the combined pig-iron and steel output of Japan as reported in government figures. In addition there was an importation of 283,000 tons of pig iron.[2] It is evident that much of the iron produced in Japan, as has already been observed, is not reported.

Coming to steel there is a similar discrepancy between the government figures concerning output and the statistics regarding imports of iron ore and pig iron. The reported production of pig iron and steel, even assuming that in the official figures none of the former is included in the latter, is much below the metallic iron imported in the raw material. As in the case of pig iron ordinary government figures do not cover the entire steel output.

Table X shows the annual production of steel in Japan for the years 1913 to 1919, inclusive, as reported in the *Financial and Economic Annual of Japan*.[3]

TABLE X

PRODUCTION OF STEEL* IN JAPAN, 1913–19, ACCORDING TO *Financial and Economic Annual*

Years	Quantity (Metric Tons)	Value (Yen)
1913	13,751	809,087
1914	15,412	864,758
1915	16,791	1,164,762
1916	305,583	46,251,283
1917	370,669	82,569,141
1918	334,014	113,619,943
1919	299,960	72,666,689

* In reporting the steel output of a country the production is stated in terms of ingots and castings—the crude furnace products out of which the more highly finished forms are made.

[1] The assumed percentage of metallic iron in the imported ore is 50 and that of the native ore 60. The former is probably as much as 10 per cent less than the actual iron content.

[2] When it is remembered that in steel manufacture, especially by the open-hearth process, much scrap is used (usually about 50 per cent) and that Japan has built several open-hearth furnaces in recent years (see *Iron Age* [October 21, 1920], pp. 1045 ff.) the discrepancy between the government trade figures and those for production becomes still more noticeable.

[3] *Twentieth Financial and Economic Annual of Japan*, 1920, p. 52. The figures for quantity are reduced from kwan to metric tons.

The sudden increase in the steel output in 1916 is accounted for by the omission of the production of the Imperial Steel Works during the first three years above tabulated and its inclusion for subsequent years. In the statistical reports of the Department of Agriculture and Commerce the figures, while not identical with those above given, are substantially the same. These reports segregate the outputs of the Imperial Steel Works and independent producers.[1] Their incompleteness, however, is shown by the small production reported for independents, which constituted during the years 1913 to 1919 only about 5 to 8 per cent of the country's total, notwithstanding the fact that during the later years of the world-war the aggregate output of the independent steel makers probably approximated that of the Imperial Steel Works.

The Financial and Economic Committee, already referred to, made a forecast of steel production, similar to that of pig iron, which was greatly in excess of published government data. The forecast for the years 1920 to 1924 was as follows:[2]

TABLE XI

ESTIMATED STEEL PRODUCTION OF JAPAN, 1920–24

Year	Tons
1920	1,031,550
1921	1,099,000
1922	1,164,000
1923	1,227,000
1924	1,287,000

These estimates are from three to four times the figures given in Japanese government documents for the years 1918 and 1919, and are doubtless nearer the present-day producing capacity of the empire than the official statistics.[3]

The consumption of steel in Japan is known to be much greater than the production. There is a small amount of steel

[1] *Thirty-fifth Statistical Report of the Department of Agriculture and Commerce of Japan*, pp. 416–17.

[2] *Iron and Coal Trades Review* (London, February 11, 1921), p. 207, and *Commerce Reports* (July 7, 1921), p. 101.

[3] The business depression which spread over the world in the fall of 1920 began in Japan late in 1919. This depression has affected steel production to a very serious extent in Japan.

exported, principally to China, but importation is relatively heavy. Prior to the world-war Japan imported considerable amounts of steel from Germany and Great Britain. During recent years these imports have come mainly from the United States. The leading articles imported are shapes in the forms of bars, rods, tees, angles, rails, and the like, and plate or sheet iron (steel)[1] not coated with other metals. These imports for the years 1917 to 1919, inclusive, with the amounts furnished by the United States are shown in the following table.[2]

TABLE XII

IMPORTS OF BARS, RODS, AND STRUCTURAL SHAPES, AND PLATE AND SHEET IRON (STEEL) NOT COATED WITH OTHER METALS, 1917–19

	Year	Total Imports		Imports from United States	
		Quantity (Metric Tons)	Value (1,000 Yen)	Quantity (Metric Tons)	Value (1,000 Yen)
Iron (steel) bars, rods, tees, angles, etc.	1917	197,601	46,369	178,974	39,474
	1918	265,740	84,221	240,583	76,393
	1919	190,889	47,721	177,556	41,989
Plate or sheet iron (steel) not coated with metals	1917	298,028	91,395	283,988	87,515
	1918	160,107	77,932	158,574	76,688
	1919	239,543	67,854	192,622	56,376

Excluding iron ore and pig iron the two groups of commodities tabulated constituted about two-thirds of the total iron and steel products imported into Japan. Other steel commodities brought in in substantial amounts from abroad are wire rods, tin plate, galvanized wire, and pipes and tubing. During the years 1917 to 1919, inclusive, approximately 90 per cent of the imported steel came from the United States.[3]

[1] In Japanese trade statistics steel is often designated as iron. Aside from pig-iron and cast-iron pipes the articles so designated, especially those coming from the United States, are almost entirely steel.

[2] *The 1919 Annual Return of the Foreign Trade of the Empire of Japan*, Parts I and II.

[3] During the last two years there has been some falling off in this importation from the United States, but complete figures are not available from Japanese sources. This country, however, still continues to supply Japan with the greater part of its foreign steel. In 1920 the United States exported to Japan 89,839

While foreign iron and steel in trade statistics are grouped in classes according to uses and stages of manufacture, there are no available figures showing the home output by kinds or classes. It is known that a large part of the pig-iron production given in government statistics is made into castings of various kinds. The output of wrought iron in Japan is insignificant, amounting annually to less than 2,000 metric tons.[1] In the Unites States such iron is more expensive than ordinary carbon steel, and is now used principally in the manufacture of chains for vessels and of pipe exposed to more than ordinary corrosion. The steel production of Japan probably consists, in the main, of standard tonnage products like rails, billets, bars, structural shapes, plates, black sheets, tin plate, and wire. But the relative importance of these several groups is not shown in published reports.[2] Special steels (high carbon and alloy) are also manufactured, but no figures are available to show the extent of this production. As already indicated, Japan has certain advantages with respect to the raw materials entering into the manufacture of such steels.

How much of the steel production and importation goes into the manufacture of military and naval equipment it is impossible to say. Much of the steel plate imported from the United States in recent years has been utilized in the building of vessels for the rapidly growing mercantile marine of the empire. Other imported steel has also been put to industrial rather than to purely military or naval uses.[3] A considerable part of the home-manufactured and a probably smaller proportion of the foreign

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tons of structural iron and steel valued at $6,295,271 and in 1921, 48,827 tons valued at $4,745,857. The exports of steel plate in 1920 were valued at $15,704,316 but in 1921 dropped to $2,442,301 (*Monthly Summary of Foreign Commerce*, December, 1921).

[1] *Thirty-fifth Statistical Report of the Department of Agriculture and Commerce of Japan*, p. 416.

[2] The character of the steel products of Japan is indicated mainly by notices and reports of the building of certain kinds of mills and works.

[3] One reason for this inference is the nature of the steel. The imported steel is mainly ordinary carbon steel, while steel for ordnance and naval purposes is largely nickel, chrome, and silicon steels.

material are doubtless destined for ordnance equipment and warship supplies. The military importance of the iron and steel industry, however, is not gauged by the proportion of product going into the making of guns, shells, armor plate, and the like. A large part of a war-time demand is for output which has industrial uses, as rails, barbed wire, tank and ship plate, silicon and tungsten steels, black sheets, and tin plate. Any nation wishing to conserve its military strength must have the support of a highly developed iron and steel industry.

The most significant feature of this branch of manufacture in Japan, as shown by the statistics concerning output and commerce, is its dependence upon foreign supplies. As already indicated, China and Korea furnish the bulk of the iron ore and coking coal. The extent of this dependence may be shown with some degree of precision in the case of iron ore by a comparison of the domestic production and imports for the years 1918 and 1919.

TABLE XIII

COMPARISON OF DOMESTIC PRODUCTION AND IMPORTS OF IRON ORE, JAPAN, 1918 AND 1919

	1918 (Metric Tons)	1919 (Metric Tons)
Domestic production*	136,838	135,292
Imports (total)	597,454	958,792
Imports from China (including Kwantung) and Korea†	596,374	938,336

* As already stated, the iron content of the Japanese ore is assumed to be 60 per cent. The output of native ore is given in government statistics in terms of metallic content only, and hence has to be transformed into units comparable to those of the imported material.

† It will be remembered that Korea, for purposes of this article, is treated as foreign territory, although politically it is now a part of the Japanese Empire and as such bears the name of Chosen.

In 1918 the imported iron ore was over four times, and in 1919 about seven times, the domestic production, and consisted almost entirely of Chinese and Korean material. In addition to this dependence upon Chinese and Korean ore is the large importation of coal and coke used for metallurgical work, aggregating in recent years over 750,000 tons annually.

In view of the ambiguity of published figures concerning the pig-iron and the steel output of the country, comparison

may be made between the total production of pig iron and steel, as reported in government documents, and the total imports of iron and steel. As much of the steel importation comes from the United States, the figures for this country may also be stated. In units of quantity and value for the years 1918 and 1919 this comparison is shown as follows:

TABLE XIV

COMPARISON OF JAPAN'S OUTPUT OF PIG IRON AND STEEL WITH TOTAL IMPORTATION OF IRON AND STEEL PRODUCTS AND WITH IMPORTS FROM THE UNITED STATES, 1918 AND 1919

	1918		1919	
	Quantity (Metric Tons)	Value (Yen)	Quantity (Metric Tons)	Value (Yen)
Japan's output of pig iron	181,246	38,091,576	209,723	38,872,446
Japan's output of steel	334,014	113,619,943	299,960	72,666,689
Total output of pig iron and steel	515,260	151,711,519	509,683	111,539,135
Total importation of pig iron and steel*	913,085	300,040,000	918,780	223,341,000
Ratio of imported iron and steel to domestic production in percentage	177.2	197.8	180.6	209.2
Imports from the United States	587,856	220,392,000	567,960	158,028,000
Percentages of imports from United States to total imports	64.38	73.45	61.79	67.72
Ratio of imports from the United States to domestic production in percentage	114.1	145.3	114.4	141.7

* A very small amount of iron imported principally from Asia is not included in this total.

The foregoing figures with reference to Japanese output and ratios of imported material to this output are based upon published government statistics. As there is apparently much pig iron and steel which is not accounted for in these publications the actual ratios of importation to production are smaller than the figures would indicate. Nevertheless, the table shows that Japan is dependent upon foreign countries for a large percentage

of its iron and steel. Making a liberal allowance for the home production not included in the government figures the ratio of imported iron and steel to domestic output would probably exceed 100 per cent. In other words, 50 per cent or more of Japan's consumption[1] is of foreign derivation.

Of the imported iron and steel the United States, during the years 1918 and 1919, furnished from 60 to 65 per cent of the quantity and from 67 to 74 per cent of the value. The ratio of American imports to domestic output as tabulated above ranged from 114.1 per cent in quantity to 145.3 per cent in value for the year 1918, and from 114.4 per cent in quantity to 141.7 per cent in value for the year 1919. These ratios, of course, would be materially reduced, under our assumption of a larger pig-iron and steel output than the government figures tabulated would indicate, but they would still be very large. If steel alone were considered the proportion of American to total imports would be materially larger, as the Japanese importation of American pig iron is comparatively small.

Roughly speaking the situation of Japan in 1918 and 1919 with reference to the consumption of iron and steel manufactured abroad or manufactured out of foreign material as compared with purely native metal may be indicated as follows:

TABLE XV

	1918 (Metric Tons)	1919 (Metric Tons)
Pig iron produced from domestic ores	82,101	81,175
Pig iron produced from imported ore including ore from Korea (estimated)	298,727	479,396
Imports of pig iron	225,057	283,111
Imports of crude, semi-crude and manufactured articles of iron and steel	688,847	635,669
Total approximate consumption of metallic iron of foreign origin*	1,212,631	1,398,176

* There is a small export of Japanese iron and steel to the Asiatic continent. While this would have to be subtracted from the total in order to bring it closer to actual consumption, it is not important for the purpose of showing how dependent Japan is upon foreign countries for the metallic iron utilized.

[1] Owing to possible duplication of product in moving from one stage of production to another, it is difficult to state Japan's consumption with any very great degree of precision. Furthermore, there is a small exportation of iron and steel principally to China. What is stated in the text, however, is substantially correct.

It will be seen from the figures given that the bulk of the metallic iron utilized in Japan, either as raw material for further manufacture or as finished articles for immediate consumption, is of foreign origin. Thus in 1919 out of an approximate total consumption of 1,479,351 metric tons[1] only 81,175 tons were mined in Japan. With respect to raw material—iron ore, coking coal, and to a considerable extent, pig iron—Japan proper is a dependency of China and Korea. With respect to crude and finished iron and steel the country is obliged to rely in large measure upon the leading steel-producing countries of the Western world.[2] It is this state of dependency of a key industry which is influencing Japan's political policies in the Orient.

ORGANIZATION OF THE IRON AND STEEL INDUSTRY IN JAPAN

The organization of the iron and steel industry in Japan has been shaped by two factors, a political policy and commercial environment. The first is responsible for the government's interest in the industry as shown by the organization of the Imperial Steel Works and the recently reported subsidies to independent producers. The second is responsible for a more or less pronounced movement toward an organization of the iron and steel industry on the mainland of Asia. The government's interest, as has been noted, is due to the close relationship

[1] The actual consumption is probably much greater than this, as much steel is made of remelted material. Under present metallurgical practice metals are often consumed several times. It should be noted in this connection that figures given for steel production often exceed the total metallic content of the ores and pig iron utilized in manufacture. This apparent statistical discrepancy is due to the use of scrap. In the manufacture of steel by the open-hearth process—the most common process now employed—about 50 per cent of the raw material consists of scrap. On the Pacific Coast of the United States as much as 85 per cent scrap is used.

[2] A recent announcement has been made of a discovery by which iron sand, which is abundant in Japan, can be utilized for the manufacture of steel. This discovery, it is stated, makes possible the country's independence of steel imports in case of need. Experiments were begun in September, 1920, with this iron sand with tolerably good results. Although the discovery is successful from a military point of view, the statement concludes that this does not necessarily mean that it insures any economic advantage over importation. See *Mining Journal* (London), October 23, 1921. Telegram, October 14, Reuter, Tokyo.

of this branch of manufacture to the military strength of the empire. The movement to the continent, which has been temporarily checked on account of the prevailing industrial depression, is determined by conditions of economy and markets. Coal and ore can be shipped at moderate expense by water to the islands of Kyushi, Honshu, and Hokkaido, but the cost of pig iron and steel would be materially reduced by locating blast furnaces and rolling mills nearer the coal and ore fields of the mainland.[1] The prospective markets, too, for tonnage products like steel rails, structural shapes, plates, sheets, and wire are greater in China and Manchuria than in Japan itself.

The published material with reference to the number and capacity of blast furnaces, foundries, steel works, and rolling mills is fragmentary and generally vague. The largest producer of iron and steel is the Imperial Steel Works located on the island of Kyushi near the ports of Wakamatsu and Moji. According to figures tabulated by the Department of Agriculture and Commerce for the year 1918, the government works produced between 90 and 95 per cent of the steel output of Japan and about 75 per cent of the combined pig-iron and steel production of the country.[2] These proportions, however, are probably greater than figures for actual present-day production would justify. A large number of independent companies have recently entered

[1] The significance of cheap assembling of material may be illustrated in the case of pig iron in the United States. According to the cost figures of five representative companies reporting to the Federal Trade Commission the "net metal" cost—chiefly ore—constituted, during the last three months of 1918, 51.73 per cent of the total furnace expense of manufacturing basic pig iron, and coke 33.14 per cent. This total expense did not include certain overhead charges like depreciation, amortization, and general office expenses which would probably have aggregated only about $2 per ton. In computing the cost of iron ore for the year 1918 the Commission found that out of an average total expense of $4.19 per ton when landed at the blast furnaces in the lower lake region—exclusive of general administrative and selling expenses—$1.93, or 46 per cent of the total ore cost, consisted of rail and water charges. See *Tariff Information Surveys* FL-21, pp. 28 and 72. In Japan the haul of ore and coal from Asia is considerably greater than in the Great Lakes region of the United States.

[2] *Thirty-fifth Statistical Report of the Department of Agriculture and Commerce of Japan*, 1918, pp. 416–17.

the industry, and some of the older concerns have enlarged their plants. Some companies have furnaces and mills of considerable capacity and are apparently doing a flourishing business. Figures supplied from the *Japan Weekly Chronicle* by Mr. James F. Abbott commercial attaché at Tokyo, give in round numbers an estimated production, in terms of pig iron, for the year 1919, of 980,000 metric tons distributed among the leading manufacturers as follows:[1]

TABLE XVI

	Metric Tons
Government Steel Works	400,000
Kamaishi Iron Mines	80,000
Hokkaido Steel Works	130,000
Hanyang Steel Works	100,000
Oriental Steel Works	30,000
Penchihu Steel Works	30,000
Anshan Steel Works	60,000
Kyonuko	100,000
Others	50,000
Total	980,000

It is to be noted that some of the companies above mentioned have their principal plants on the continent. The Anshan Steel Works and the Penchihu Steel Works are located in Manchuria, and the Hanyang Steel Works, in the province of Hupei, China, at the junction of the Han and Yangtze-Kiang rivers. Subtracting the estimated production of these manufacturers of the mainland from the total the aggregate output of the Government Steel Works is approximately 50 per cent of the total for Japan. It may, however, be stated in this connection that some of the larger of the new companies, like the Oriental Steel Works, expect to equal the government enterprises when pending extensions are completed.

Figures with reference to the capacity of iron and steel works distributed according to geographical location, have been compiled by the Department of Agriculture and Commerce of the empire. These figures are those for the present and future

[1] *Iron Age* (October 21, 1921), p. 1045.

capacity of steel works controlled by Japanese. Tabulated for the years 1918 to 1922–23 they are as follows:

TABLE XVII

	Steel				
	1918 (Metric Tons)	1919 (Metric Tons)	1920 (Metric Tons)	1921 (Metric Tons)	1922–23 (Metric Tons)
Japan	1,150,000	1,600,000	1,770,000	1,920,000	2,000,000
Korea (Chosen)	15,000	50,000	50,000	50,000	50,000
Manchuria	.....	.....	30,000	60,000	60,000
	Finished Steel Material				
	(Metric Tons)	(Metric Tons)	(Metric Tons)	(Metric Tons)	(Metric Tons)
Japan	810,000	1,140,000	1,260,000	1,400,000	1,490,000
Korea (Chosen)	14,000	40,000	40,000	40,000	40,000
Manchuria	.....	20,000	50,000	50,000	50,000

The steel materials recorded in the second part of this table are derived from the steel listed in the first, and hence the two are not to be added. It should be remembered also that iron and steel capacity does not coincide with actual production. The figures here listed, however, are given as indicating certain estimates made of the geographical distribution of the iron and steel capacity of Japanese works. So far as actual production is concerned they probably have little real statistical value. They do show the movement of Japanese steel manufacture toward the continent—a movement likely to be more pronounced in the future than it has been in the past.

In a report published by Mr. Abbott some thirty-seven independent companies are named. Over half of these are small producers serving either a local trade or manufacturing highly specialized articles. Some, however, are concerns of considerable magnitude. In addition to the companies already mentioned as having plants on the continent are the Mitsubishi Steel Manufacturing Company with works on the west coast of Korea, and the Okura Mining Company operating in the province of Kiang-Su, China, about twenty miles from Nanking. In Manchuria the South Manchurian Railroad is under Japanese

control and is closely associated with the iron and steel development of the southern part of that province.

There is apparently a very close relationship between the larger independent steel manufacturing companies and the Japanese government. This relationship is shown by the control exercised by the banking interests of the country, which are themselves intimately associated with governmental policy. In all larger mining and manufacturing companies the banking interests virtually shape business policies. Furthermore, information has lately been received that the Japanese government has made advances of money to five of the important private iron and steel corporations of the country. Each of these five is to receive 10 million yen, approximately $5,000,000. The recipients are the Hokkaido Iron (Steel) Works, the Oriental Steel Works (Toyo Seitsusu Kaisha), the Mitsubishi Steel Works, the Penchihu Iron Colliery Company and the Tenaka Mining Company. The reason assigned for this government subsidy is the slump in the value of pig-iron stock accumulated by these concerns.[1] It is worthy of note that the principal plants of two of these recipients are on the Asiatic mainland.

THE JAPANESE "SPHERE OF INFLUENCE"

On the Asiatic mainland Japan has absorbed Korea, making it an integral part of the empire. Manchuria, especially the part south of the Chinese Eastern Railroad, and extending over most of the territory to Korea Bay and the Gulf of Liatung, is practically governed by Japan, although nominally a part of China and under the jurisdiction of the officials at Peking. After the capture and occupation of Kiaochow following the outbreak of the world-war, the province of Shantung was also brought under Japanese control. At the recent Arms Conference held in Washington an agreement was reached by which this province will be restored to China. Japanese authority has to all appearances been definitely extended over the northern as well as the southern part of the island of Saghalien. In addi-

[1] *Ibid.*, p. 1045.

tion to these regions the political influence of the Island Empire is felt in Eastern Siberia especially about Vladivostok, in Mongolia east of the Great Khingan Mountains, and in the province of Chihli, both north and south of Peking and in the northeastern part of the province of Hunan.

Aside from southern Manchuria, Korea, and the Chinese provinces of Chihli, Shantung, and Hunan, all of which have been touched upon above in describing the raw-material resources of Eastern Asia, it is difficult to say anything definite respecting the reserves of iron ore and coal in this vast stretch of territory. It is commonly believed, however, that the iron-ore resources of Mongolia are great and that coal and ore deposits are extensive in the extreme east of Siberia, and throughout the island of Saghalien. Over the greater part of these more remote regions distance and lack of transportation facilities prevent utilization of whatever iron-ore or coal deposits they may possess. Much of Manchuria and Mongolia, even with up-to-date transportation facilities, is too far away from existing industrial centers for the economical shipment of such bulky commodities as iron ore or coal. If such resources are ultimately utilized in these regions, assuming their existence, they will probably be developed by companies whose plants are on the continent near enough to make the assembling of material more profitable than would be its shipment to Japan proper or to coastal points on the mainland.

It has already been seen that Northern China and Korea supply Japan with the bulk of the coal used there for metallurgical purposes, and that large deposits of this fuel exist in southern Manchuria. Much iron ore is also found in this region, but the Japanese manufacturers at present get the greater part of their supply of this material from places south of their country's "sphere of influence." The Yangtze Valley, as has already been observed, furnishes Japan with the greater part of its imported iron ore. Even here, however, Japanese interests are influential, as is shown by their control of the steel company at Hanyang. Recently there have been some attempts to establish a national government in this region of China, centering in the province of Hupei, similar to the governments at Peking

and Canton.[1] While there is much obscurity about these movements and it is hazardous to assume that they are in any way incited by Japanese steel interests, they do furnish a plausible ground for extending a political authority which is really impelled by an economic need. That this imperialistic penetration into a region endowed with great natural resources is an economic need is obvious to anyone believing in the necessity or desirability of Japan's maintaining a strong military establishment. Such an organization must be based upon an industry capable of supplying requisite materials. The country's own iron-ore and metallurgical-coal reserves are at best very meager, and the nearest country capable of supplying on any large scale the finished iron and steel required for industrial and military uses is over eight thousand miles away.

The economic wisdom of this imperialistic movement may of course be questioned, as similar developments have been in other countries. The extensive military establishment which generally accompanies such extensions of power does represent the withdrawal of much wealth or capital from more productive expenditure. How far this apparent waste is justified by the protection afforded and the indirect influences operating to further a better oganization of industries in general is a matter of dispute. It is evident, however, that Japan feels that the maintenance of a strong military organization is essential. Such being the case, it is natural that the industrial basis of that organization should be developed in accordance with modern technique.

The iron and steel industry is doubtless only one of several economic influences shaping the political policies of the Island Empire in the Far East. It is, however, crucial. Much has

[1] The nominal president of Northern China is Hsu Shih Chang, whose capital is at Peking. President Sun Yat Sen rules at Canton with evidently a wider recognition of authority than is given to the northern executive. President Hsu is seriously handicapped for funds, and the northern government has been practically controlled by the *tuchun*, Chang Tso-lin, of Manchuria. Chang Tso-lin is reputed to have the backing of the Japanese government. See interesting article by J. O. P. Bland in the *Atlantic Monthly* of November, 1921, on "The Far Eastern Problem." At the present time (May, 1922) Chang Tso-lin is being opposed by another *tuchun*, Wu Pei-fu.

been made in popular discussion of the pressure of an increasing home population as the motive with Japanese statesmen in this policy of expansion. It is worthy of note, however, that the absorption of Saghalien and southern Manchuria has not been followed by any considerable migration of Japanese into these regions. Neither has this reported pressure of population resulted in any large movement toward the island of Hokkaido, which still has considerable fertile land unoccupied. Moreover, Korea, which has virtually been annexed to the empire, and the provinces of Chihli and Shantung, over which Japan exercises more or less political influence, were already densely populated when this imperialistic policy began to be exerted. Seen, however, in the light of the powerful support which the resources of these regions are capable of rendering a key industry in the political and military structure of the empire Japan's course on the Asiatic continent is readily explained.

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THE PREVALENCE OF DUMPING IN INTERNATIONAL TRADE. I

An attempt to survey the extent to which dumping, or price-discrimination between national markets, is practiced encounters many difficulties. The dumper may have various weighty motives for desiring to withhold from public knowledge the fact that he is selling abroad at lower prices than at home. Even where no deliberate attempt is made to conceal the dumping from the vulgar gaze, it is not likely to be a matter of common knowledge except to those closely interested in the particular dumping transactions. Valuable sources of information are afforded by the publicity which inevitably attends the operations of great industrial combinations and by the numerous governmental investigations into various phases of business activity which have accumulated and made public great masses of more or less detailed data relating to price-policies in international trade. But much of even such material must, unfortunately, be used with great caution. The serviceability of the evidence obtained from business men is prone to be lessened by the intrusion of some element of bias, by the loose use of terminology, or by lack of adequate analysis. Where instances of dumping are reported by others than those directly involved in the transactions, it is often difficult to determine in specific cases whether the reported sales at different prices in different countries are genuine instances of dumping or are to be adequately accounted for by differences in the conditions and terms governing the sales to purchasers in the domestic and the foreign markets, respectively. If the reports of dumping originate with competitors of the dumping concern they are especially to be treated with caution, because of the common tendency of business men to apply invidious terms to any type of competition, however legitimate it may be, which disturbs their chances for profit. These are serious obstacles to safe generalization. In the present survey of the prevalence of dumping and the circumstances under which it is most frequently

practiced, careful discrimination has been exercised in the acceptance of evidence, in the belief that overconservatism would be less injurious than overexaggeration.

A. INSTANCES OF DUMPING BEFORE 1880

The practice of dumping has long been known, although not by this name, to writers on commercial matters. Adam Smith, for example, not only discusses unfavorably the practice on the part of governments of stimulating exports, even at prices lower than those current in the domestic market, by the grant of official bounties, but gives an instance from personal observation of the grant of bounties on exports by a private combination of producers in order to reduce the supply available for the domestic market.[1] Except, however, as it resulted from the grant of official export bounties, the extensive practice of dumping could not have developed until after the Industrial Revolution brought large-scale production and the active search for wider markets.

England was the first country to undergo the Industrial Revolution. It is therefore not surprising that the first extensive charges of dumping were directed against her manufacturers. It is by no means certain, however, either that actual British practice provided a substantial basis for the charges of dumping, or that fear of or resentment against British dumping, actual or prospective, was the real motive leading to the making of the charges. If foreign manufacturers can be plausibly charged with dumping, an effective argument is made available in support of tariff protection to domestic industries endangered by such putatively unfair foreign competition. American protectionist writers throughout the nineteenth century made much of this argument for protection, English manufacturers generally being the ones charged with the resort to dumping. English manufacturers, it was repeatedly alleged, in the early years of American independence not only dumped in the United States but did so with the

[1] *Wealth of Nations*, Book IV, chap. v: "I have known the different undertakers of some particular works agree privately among themselves to give a bounty out of their own pockets upon the exportation of a certain proportion of the goods which they dealt in. This expedient succeeded so well that it more than doubled the price of their goods in the home market, notwithstanding a very considerable increase in the produce."

deliberate purpose of crushing or, in the language of the time, "stifling" or "strangulating" the young American industries. The only supporting evidence possessing any degree of concreteness consists of two or three isolated instances of doubtful authenticity and, even if authentic, by themselves of little general significance. These same instances are cited again and again in the American protectionist literature of the last century.

Alexander Hamilton, in his famous *Report on Manufactures*, declared that the greatest obstacle encountered by new industries in a young country was the system of export bounties which foreign countries maintained in order "to enable their own workmen to undersell and supplant all competitors in countries to which these commodities are sent." He promised to give instances in the course of the report, but the only ones actually mentioned were English government bounties on the export of sailcloth and linens. Hamilton also drew attention to the possibility that unofficial bounties were being given by combinations of producers: "Combinations by those engaged in a particular branch of business in one country to frustrate the first efforts to introduce it into another by temporary sacrifices, recompensed, perhaps, by extraordinary indemnifications of the government of such country, are believed to have existed, and are not to be regarded as destitute of probability."[1] Hamilton's plea for protection to American manufactures, it was later alleged, caused such alarm among English manufacturers that they banded together to dump their products on the American market with the aim of crushing their American competitors.[2]

[1] "Report on the Subject of Manufactures, 1791," in F. W. Taussig, *State Papers and Speeches on the Tariff*, Cambridge, 1893, pp. 31, 32; 92, 93. Hamilton could have cited the unofficial bounty reported by Adam Smith in *The Wealth of Nations*, with which work he was undoubtedly well acquainted. (Cf. E. G. Bourne, "Alexander Hamilton and Adam Smith," *Quarterly Journal of Economics*, April, 1894).

[2] "In the beginning of the year 1792 when the report of General Hamilton, then Secretary of the Treasury, made by order of the House of Representatives, was published in England, it created such alarm that meetings were called in the manufacturing towns, and Manchester alone, at a single meeting, subscribed 50,000 pounds sterling toward a fund to be vested in English goods, and shipped to this country for the purpose of glutting our market and blasting the hopes of our manufacturers in the bud." (*Address of the American Society for the Encouragement of Domestic Manufactures*, 1817, cited by G. B. Curtiss, *Protection and Prosperity*, New York, 1896, p. 134.)

Gallatin, writing in 1810 in opposition to protection, gave some support to the charge that English manufacturers were engaging in dumping. Supporting evidence from this source would have great weight. Gallatin was a conservative writer, not inclined to make wild and unsubstantiated charges. Moreover, his bias, if he had one, would be in the direction of minimizing or rejecting altogether the accusation that dumping was prevalent because of the aid which such charges lent to the agitation for high protection. In his *Report on Manufactures*, April 9, 1810, Gallatin wrote as follows:

> It is believed that, even at this time, the only powerful obstacle against which American manufactures have to struggle, arises from the vastly superior capital of the first manufacturing nation of Europe, which enables her merchants to give very long credits, to sell on small profits, and to make occasional sacrifices.[1]

It is to be noted that this statement makes no charge of predatory dumping, i.e., of dumping intended to eliminate competition, and that it suggests only by implication the prevalence of dumping in any form.

Soon after the Treaty of Ghent between England and the United States had made possible a resumption of the trade relations which had been interrupted by the War of 1812, Americans accused English manufacturers of deliberately dumping their products in the United States in order to crush the new industries which had developed there during the war. What evidence has been cited in substantiation of the charges, although it has been accepted by many writers as full confirmation thereof, is neither by its character nor its quantity such as to bring conviction to an unbiased person either that any of the dumping which occurred was predatory in its motives, or even that there was any intentional dumping. A brief survey of the literature on this episode in the commercial relations of England and the United States is worth while both for its historical interest and because it helps to demonstrate the great need for caution in dealing with charges of dumping by biased or uncritical writers.

[1] Cited by O. L. Elliott, *The Tariff Controversy in the United States 1789–1833*, "Leland Stanford University Publications," 1892, p. 148, n.

The cessation of hostilities in 1814 between England and France and between England and the United States reopened to English manufacturers the markets of the world which had been closed to them during the continuance of hostilities, and gave them an outlet for the great stocks of commodities which they had accumulated during the interruption of international commerce. There immediately resulted a wild burst of speculation in the export of commodities, a speculation which was by no means confined to the manufacturers of these commodities. At first, because of the scarcity of English goods in the markets hitherto closed to them by war, and because the speculators, still remembering earlier misadventures in similar enterprises, were restrained in their activities,[1] the exporters realized great profits from the sales of their merchandise. Great quantities of English goods were exported to the Continent and to the United States without waiting for orders and were sold by agents in the ordinary way or at auction for whatever prices they would bring. The first speculative shipments brought very high prices. But the high profits were a stimulus to further speculation and an attraction to new speculators. In the spring of 1816, English manufacturers and traders again sent out shiploads of merchandise without waiting for orders. They soon discovered to their discomfiture that they had over-reached themselves. An overabundance of supplies led to low prices and tremendous losses to the exporters.[2] To the extent that the prices realized abroad, after deduction of transportation and other incidental costs, were less than the prices current in England, dumping technically occurred. But it was unintentional dumping. The shipments had been made without receipt of orders in the expectation that a profit would be realized. That on the contrary losses were suffered was a source of bitter disappointment. There was nothing novel in the speculative shipment of goods for sale in foreign markets.

[1] Cf. Thomas Tooke, *Thoughts and Details on the High and Low Prices of the Thirty Years, from 1793 to 1822*, 2d. ed., London, 1824, p. 109; "In 1815 and the early part of 1816 the exports from this country had been made with great forbearance and prudence."

[2] Cf. J. B. McMaster, *A History of the People of the United States*, New York, 1907, IV, 323–25, 340.

Such speculative exporting had been engaged in by Englishmen to South America in 1810 upon the temporary removal of the Portuguese government to Brazil, and in 1811 to Portugal upon the expulsion of the French therefrom. Americans had themselves exported in similar manner to England, in 1810, when the Napoleonic restrictions on commerce were temporarily removed,[1] and again in the very period here under consideration upon the resumption of trade relations after the War of 1812 was terminated.[2]

Moreover, the depression in prices in 1816 was not confined to the export markets but was widespread in England itself, and the prices received in the United States, even when they were below cost of production, were not necessarily lower than the prices received at home.[3] It is difficult to see, therefore, how predatory motives can be attributed to the exporters. The resort by English traders to the auction sale method of disposing of their goods in the United States was especially resented by American manufacturers because of the absence under this sales method of any check to the fall in prices. But the auction sale was used, not because it would bring low prices, but because sales were not readily obtainable in any other way.[4]

In a famous speech delivered in the British House of Commons on April 9, 1816, and dealing primarily with the prevailing agricultural depression in England, Henry (later Lord) Brougham made incidental reference to the export speculation as a contributory cause of the depression. His words later served a long line of writers as evidence upon which to rest the charge that the primary purpose of the English exports to the United States had been to destroy the newly developed American manufactur-

[1] Thomas Tooke, *op. cit.*, pp. 81–89.

[2] E. R. Johnson, *et. al.*, *History of Foreign and Domestic Commerce of the United States*, Washington, 1915, II, 33.

[3] Cf. Edward Stanwood, *American Tariff Controversies in the Nineteenth Century*, Boston, 1903, I, 166: "The market for manufactured goods both at home [i.e., England] and abroad was completely demoralized [in 1816]."

[4] *Ibid.*, p. 169: "The auction system was resorted to because there was no other way to dispose of the cargoes." It appears, however, that English exporters evaded in part the American customs duties by consigning their merchandise to agents in the United States at fictitiously low values (J. B. McMaster, *op. cit.*, p. 341).

ing industries. Brougham's reference to the speculation in exports was as follows:

> After the cramped state in which the enemy's measures, and our own retaliation (as we termed it), had kept our trade for some years, when the events of spring, 1814, suddenly opened the continent, a rage for exporting goods of every kind burst forth, only to be explained by reflecting on the previous restrictions we had been labouring under, and only to be equalled (though not in extent), by some of the mercantile delusions connected with South American speculations. Everything that could be shipped was sent off; all the capital that could be laid hold of was embarked. The frenzy . . . . descended to persons in the humblest circumstances, and the furthest removed, by their pursuits, from commercial cares. . . . . Not only clerks and labourers, but menial servants engaged the little sums which they had been laying up for a provision against old age and sickness; persons went round tempting them to adventure in the trade to Holland, and Germany, and the Baltic; they risked their mite in the hope of boundless profits; it went with the millions of the more regular traders: the bubble soon burst . . . . ; English goods were selling for much less in Holland and the north of Europe, than in London and Manchester; in most places they were lying a dead weight without any sale at all; and either no returns whatever were received, or pounds came back for thousands that had gone forth. . . . .
>
> The peace with America has produced somewhat of a similar effect, though I am very far from placing the vast exports which it occasioned upon the same footing with those to the European market the year before; both because ultimately the Americans will pay, which the exhausted state of the continent renders unlikely; and because *it was well worth while to incur a loss upon the first exportation, in order, by the glut, to stifle in the cradle those rising manufactures in the United States which the war had forced into existence contrary to the natural course of things.*[1]

It is to be noted that Brougham ascribed the speculative shipment of exports to the hope of immediate and extraordinary profits and not to the hope of stifling the rising American manufactures. The latter, if it should result, he simply regarded, perhaps somewhat uncharitably, as ample *post facto* consolation for the immediate and unanticipated losses incurred in the trade. Yet with Brougham's speech as their only evidence, writer after writer has accused the English manufacturers of that time of having dumped in the United States with the deliberate object of

[1] *Hansard*, 1st Series, XXXIII (1816), 1098–99. These sections of the speech are also to be found in the *Edinburgh Review* for June, 1816 (LII, 263–64.) The italics are mine.

crushing the new American industries.[1] In many instances such writers make their case appear stronger than it is by citing, away from its context, only that part of Brougham's speech which is italicized above.[2]

The Tariff Act of 1816 was the first distinctly protectionist tariff of the United States, and it has been claimed that the threat to American industries from English dumping, and especially Brougham's frank utterance with respect thereto, was an important influence contributing to the enactment of this, as well as of subsequent, protectionist legislation.[3] There is no doubt that the fear of English dumping, actual or pretended, played apart, although probably a very minor one, in the development of Amer-

[1] Cf. Edward Stanwood, *American Tariff Controversies in the Nineteenth Century*, I, 168: "Mr. Brougham's words have often since done their duty in firing the protectionist heart."

[2] There is presented herewith what is probably an incomplete list of authors who have charged the English manufacturers of this period with predatory dumping in the United States on a large scale, with the italicized portion of Brougham's speech, given apart from its context, as their only supporting evidence: H. C. Carey, *Principles of Social Science*, Philadelphia, 1858, II, 128; R. W. Thompson, *The History of the Protective Tariff Laws*, Chicago, 1888, pp. 126–28; G. B. Curtiss, *Protection and Prosperity*, New York, 1896, pp. 135–36; John P. Young, *Protection and Progress*, Chicago, 1900, p. 305; J. L. Bishop, *A History of American Manufactures*, II, 212; Friedrich List, *The National System of Political Economy* (English translation), London, 1904, p. 70; E. R. Johnson, *History of Domestic and Foreign Commerce of the United States*, II, 35. Edward Stanwood, *American Tariff Controversies in the Nineteenth Century*, I, 166–68, makes the same charge on the same evidence, but quotes more fully from Brougham's speech. William Roscher, *Principles of Political Economy* (Lalor's translation), Chicago, 1882, II, 437, quotes from Brougham's speech only the section italicized above as confirmation of the exclamation: "How frequently it has happened that England by keeping down her prices for a time has strangled her foreign rivals." Ugo Rabbeno, *American Commercial Policy*, 2d ed., London, 1895, p. 153, also accuses the English manufacturers of having engaged at this period in predatory price-cutting: "The English manufacturers, to whose merchandise, after years of commercial war, an ample market was finally opened, rushed as if to the attack of a fortress; and it was indeed the weak and badly defended fortress of American manufactures which they wished to conquer, even at the sacrifice of selling under cost-price." But he makes no reference to Brougham's speech and presents no other evidence in support of the charge.

[3] Cf. R. W. Thompson, *The History of the Protective Tariff Laws*, pp. 126–28; cf. also, Alfred Marshall, *Industry and Trade*, p. 781: "The high Protectionist policy of America, from which England has been a chief sufferer, was largely due to the sedulous spreading among the American people of stories as to her own ungenerous dealings, which had unfortunately some solid foundation."

ican protectionist sentiment.[1] In so far as the Act of 1816 was concerned, however, its introduction in Congress preceded the great collapse of prices of imported English goods and preceded also the first arrival in the United States of a report of Brougham's speech.[2] It does appear, however, that some Americans had foreseen, before it actually developed, the intense and possibly predatory competition to which the new and weak American manufacturing industries would be subjected after the wartime restriction on commerce had been removed, and that this prospect of unrestrained competition from Europe was a factor in the decisions of the committee which drafted the tariff bill of 1816.[3]

While the charge that English manufacturers were at this time carrying on a deliberate campaign of predatory dumping must be regarded, therefore, as unproved, there is less reason to doubt that there were occasional instances of the practice of dumping in less objectionable form, especially in such branches of English industry as were in the control of relatively few individuals or of combinations of producers. An English work lends support to the charge of dumping, although not of predatory dumping, by English manufacturers, in the statement that "at the beginning of the nineteenth century Lancashire spinners were accused of selling yarns *sub rosa* at miserable prices, that is, of

[1] Taussig's standard *Tariff History of the United States* makes no reference to dumping as one of the factors in the development of protectionism in the United States.

[2] Cf. J. B. McMaster, *A History of the People of the United States*, IV, 340–41, for statement that British sales in the United States were not at low prices until 1816, and that the framers of the Tariff Act of 1816 had utterly ignored the danger of auction sales as tending toward ruinous prices. Cf. Edward Stanwood, *American Tariff Controversies*, I, 168: "Mr. Brougham's speech came too late to affect the tariff legislation of Congress." Brougham's speech was made on April 9, 1816. The tariff act of 1816 was signed on April 27, 1816. The first American reference to Brougham's speech appears to have been that in *Niles' Register* of December 28, 1816. An error of List in assigning the speech to 1815, followed by H. C. Carey and others, helped to establish the impression that the Act of 1816 was in part a reaction against Brougham's utterance. Cf. Friedrich List, *The National System of Political Economy*, p. 70, and H. C. Carey, *Principles of Social Science*, II, 128.

[3] Cf. *Report of the House Committee on Commerce and Manufactures*, February 13, 1816. *Annals of Congress*, 14th Cong., 1st Sess., p. 964: "The foreign manufacturers and merchants will put in requisition all the powers of ingenuity; will practice whatever art can devise and capital can accomplish to prevent the American manufacturing establishments from taking root and flourishing in their rich and native soil."

dumping" and that the accusers, apparently English manufacturers of cotton cloth, made a vain attempt to induce Parliament "to check the practice on the ground that the foreign manufacturers of cotton fabrics were thereby afforded an unfair monopoly."[1]

As has already been indicated, the charge of European dumping played some part in protectionist propaganda in the United States in subsequent years. Henry Clay, in a speech in Congress in 1824, urged the need of protection to American manufactures because "the unprotected manufactures of a country are exposed to the danger of being crushed in their infancy either by the design or from the necessities of foreign manufacturers." Apparently this argument had already been losing its effectiveness, for Clay proceeded: "Gentlemen are incredulous as to the attempts of foreign merchants and manufacturers to accomplish the destruction of ours. Why should they not make such attempts?" But the only evidence he presented to demonstrate the credibility of charges of predatory price-cutting was a reputed offer of an American to carry the mails between Baltimore and Washington for a whole year for one dollar in order to drive a competitor off the road.[2] That the invocation of the danger of British predatory dumping was no longer seriously regarded as an argument for protection is further suggested by the fact that when John Quincy Adams, writing in 1832, made use of this argument, he did so somewhat apologetically, and admitted that there was a common tendency to exaggerate the losses which British manufacturers were willing to undergo in order to retain control of the American market.[3]

[1] S. J. Chapman and Lord Brassey, *Work and Wages*, London, 1904, I, 40–41. This is the earliest instance which I have found of a protest against dumping by consumers *in the dumping country*. Later in the century such protests were common in many countries. See *infra*.

[2] Speech in House of Representatives, March 30 and 31, 1824; *Annals of Congress*, 18th Cong., 1st Sess., III, 1988–89 (also in F. W. Taussig, *State Papers and Speeches on the Tariff*, p. 295).

[3] *Report of Committee on Manufactures*, 22d Cong., 1st Sess., House Report 481, p. 20: "We may, and probably do, often greatly exaggerate to ourselves the immensity of exertions and of sacrifices made by the British manufacturers to retain and preserve in their own hands the control of foreign markets. But that such exertions and sacrifices are and will be made by large manufacturing establishments in which extensive capitals are employed, cannot be doubted."

Another indiscreetly frank British utterance later supplied further support for American charges that British manufacturers were practicing dumping with predatory motives, even after the adoption of free trade in England. In the report of a House of Commons committee of 1854 on the state of industry in the mining districts the following statement was made:

> The labouring classes generally in the manufacturing districts of this country, and especially in the iron and coal districts, are very little aware of the extent, to which they are often indebted for being employed at all, to the immense losses which their employers voluntarily incur in bad times in order to destroy foreign competition, and to gain and keep possession of foreign markets. The great capitals of this country are the great instruments of warfare against the competing capital of foreign countries, and are the most essential instruments now remaining by which our manufacturing supremacy can be maintained.[1]

Marshall comments on this statement that "in England it never attracted much notice, and was speedily forgotten: but in earlier decades almost every American had it brought to his notice."[2]

But with the establishment of free trade in England and the development of large-scale manufacturing industries in other countries, such complaints against English manufacturers diminished, and charges of dumping began to be directed against other

[1] Cited by Alfred Marshall, *Industry and Trade*, p. 782. It is not clear whether this was a statement of the committee itself or of some witness who appeared before it.

[2] *Ibid.* Marshall appears to be guilty here of exaggeration, and to be overanxious to convict the English of dumping in order to minimize the case for antidumping legislation to be enacted by England itself. The writer has not found a single reference to this statement in American protectionist literature, and the only other reference encountered was in Roscher, *Principles of Political Economy* (Lalor's translation), Chicago, 1882, II, 437, n., who says that the report "speaks of the great losses, frequently in from three to four years, of £300,000 to £400,000, which the employers of labor voluntarily underwent, in order to control foreign markets." Marshall adds (*ibid.*, p. 783, n.), "Inquiries made in America in 1875 convinced me that the relatively few cases of such practices as had occurred in an earlier generation, had had some considerable influence in checking new industrial experiments, through the effect which they exercised on the imagination." Cf., also, Marshall's *Memorandum on the Fiscal Policy of International Trade*, House of Commons Papers 321 (1908), p. 26: "English manufacturers, especially in the iron industry, were for more than half a century by far the chief ill-doers in this direction [i.e., of dumping], and the memory of their ill-deeds rankles sorely in American minds."

countries, including the United States itself. It is said that after the Civil War there was constant complaint by Canadians of American dumping, and that in 1872, during a depression in the United States, the complaint "was particularly loud and bitter."[1] Marshall says that inquiries made by him in America in 1875 convinced him that Ontario manufacturers had real cause for fear of American dumping.[2] Bismarck, in 1879, when submitting to the Reichstag the new tariff bill embodying much higher protection for German manufactures than had hitherto been prevalent, presented as one of the chief arguments in support of the bill the claim that the low German tariff had hitherto made Germany the dumping-ground (*Ablagerungstätte*) of foreign countries.[3] In 1880, the American Secretary of State, W. M. Evarts, recommended to American manufacturers of cotton that they dump abroad in order to establish their trade in foreign markets.[4] In 1886, witnesses before the British Commission on the Depression of Trade and Industry cited many instances of dumping in England in three of the four industries investigated by the Commission. Most of the charges were against German and French manufacturers, but in one instance at least a specific instance of dumping was charged against American manufacturers.[5] A minority report of the Commission recommended a 10 or 15 per cent ad valorem tariff on imports to countervail dumping and other artificial advantages enjoyed by foreign manufacturers in their competition with those of England in the English market.[6] It is said that the protected industries of Victoria made it a com-

[1] C. H. Chomley, *Protection in Canada and Australia*, London, 1904, p. 43. Cf., also, the *Economist* (London), November 16, 1907, p. 1968.

[2] *Industry and Trade*, p. 783, n.

[3] W. H. Dawson, *Protection in Germany*, London, 1904, p. 71.

[4] Cited in U.S. Dept. of Commerce and Labor, Bureau of Statistics, *Special Consular Reports*, XXXVI (1905), 45: "We have only to continue the manufacture of pure cottons; . . . . sacrifice profits for a time, if necessary, to secure trade standing in the several markets; . . . . and the several roads to universal trade are more open to us to-day than they were to the British manufacturers 30 years ago."

[5] *Final Report* (C. 4893), pp. lv, lvi, lvii; *Second Report, Minutes of Evidence*, Part 1 (C. 4715), pp. 33, 122, 218, etc.

[6] *Final Report* (C. 4893), p. lxv.

mon practice in the latter part of the nineteenth century to dump in the rest of Australia.[1]

B. THE PREVALENCE OF DUMPING SINCE 1880

In more recent times the growth of trusts and combinations in industry has brought with it the systematic and more or less continuous practice of export dumping on the part of many of the important manufacturing industries of the great industrial nations, and especially on the part of such industries as were organized into producers' trusts or combinations. The literature of this period on dumping, much of it a by-product of the study of the operations of industrial trusts and combinations, is voluminous, and it will be possible in the following pages to indicate only the outstanding features of dumping as practiced by the exporting industries of the countries important in world commerce.

GERMAN DUMPING

There is general agreement that before 1914 export dumping was more widespread and was more systematically practiced in Germany than in any other country. The resort to export dumping in Germany was facilitated by the high protective tariff and by the almost complete organization of large-scale industry into kartells, or industrial buying and selling combinations. Both of these factors checked price-competition in the domestic market, the former from outside Germany and the latter among German producers themselves. Combined, they made it possible for many of the kartells to adopt as a definite price-policy the maintenance of domestic prices at the foreign level plus the full amount of the German import duties and the sale for export at the best prices obtainable, even if these should be substantially below the domestic prices. It is obvious that systematic and continued dumping is not likely to arise if the dumping concern must share the higher domestic prices with its competitors and must bear by

[1] C. H. Chomley, *Protection in Canada and Australia*, pp. 182–83: "'Dumping' was, in fact, a remarkable feature in the business of most of the more successful protected industries of Victoria. The makers of starch, of condensed milk, of nails, of bottles, of candles, of straw board, of blacking, of reaper and binder twine and many other articles habitually sold their goods at much lower prices in Sydney and the rest of Australia than in Melbourne."

itself the cost of the export dumping. In Germany the kartell method of combination provided the machinery whereby, without the loss of the individuality of the separate concerns, the benefits and the burdens of export dumping could be equitably distributed among the domestic producers. The protective tariff prevented foreign competitors from sharing in the high domestic prices resulting from the price-fixing activities of the kartells, provided only that the kartells did not endeavor to make the German prices exceed the prices in foreign markets by more than the cost of transportation to Germany plus the duty on foreign imports. The comparative unimportance, in the export trade of Germany, of agricultural products and of raw materials produced under small-scale conditions, commodities which for reasons later to be explained are least likely to be systematically dumped, operated also to make dumping prevalent over a wider range of the export trade of Germany than of other countries in whose exports these commodities were more prominent. Nevertheless, German dumping has received an undue share of attention as compared to that of other countries which are likewise not backward in the resort to the practice. The publicity which necessarily attaches to the operations of loose combinations of producers such as the German kartells as compared to more unified combinations or trusts such as those of the United States, England, or Canada, and also the painstakingly rigorous searching of German commercial methods for evidence of unfair tactics which had been the self-assigned task of many publicists in other countries—and especially in France—even before 1914 and was embarked upon for propagandist purposes by a host of writers after 1914, operated to make prominent the German practice of dumping while tending to keep in the shadow the dumping of other countries.

Many, probably most, of those German kartells which engaged in the export trade commonly and systematically sold at lower prices to foreign than to domestic purchasers.[1] Most of the

[1] Cf. *Memorandum on the Export Policy of Trusts in Certain Foreign Countries*, in Great Britain, Board of Trade: *Report on British and Foreign Trade and Industrial Combinations*, 1903 (C. 1761), p. 298: "The fact that dumping is a policy habitually practiced by the German kartells is beyond controversy." (This report

kartells left the actual handling of the export trade to the individual members. But if these kartells were anxious that greater quantities of their products should be disposed of outside of Germany than could be sold abroad at the prices established for the German market, it was necessary to exercise pressure on the members, for the individual member concerns would be unwilling to export abroad as long as more remunerative prices were obtainable at home. In some cases an attempt was made to meet the problem either by requiring the member concerns to export a stated percentage of their output or by setting maximum limits on the amounts which they could dispose of in the domestic market. It was difficult, however, to enforce such agreements, and, moreover, this method failed to take into account the relative advantages for export which some plants had over others, because of situation, size, foreign connections, experience in the foreign trade, or for other reasons. Resulting from these circumstances, there was general resort among the kartells desirous of practicing export dumping, either to a transfer of the handling of the export trade from the individual concerns to a central export agency supported by the kartells as a whole from contributions by the members, or, more generally, to the system of export bounties to members, granted in proportion to their exports, and supported by a levy upon all the members in proportion to their productive capacity or normal output.

Export dumping by German industries, and especially by the iron and steel trade, began far back in the nineteenth century, even before the rise of the kartells.[1] But systematic and steady dumping on an extensive scale apparently began with the organization of kartells in the late eighties and the nineties of the nineteenth century.[2]

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will henceforth be referred to as *Memorandum on the Export Policy of Trusts*. Willi Morgenroth, *Die Exportpolitik der Kartelle*, pp. 15–29, gives detailed comparisons of the domestic and export prices of many of the German kartells.

[1] "Low export prices have always prevailed in the German iron and steel trade."—Francis Walker, "The German Steel Syndicate," *Quarterly Journal of Economics*, XX (May, 1906), 391.

[2] Cf. Josef Grunzel, *Economic Protectionism*, p. 226. Arthur Raffalovich, a well-informed and acute student of industrial combinations, as far back as 1889

Kartell dumping may take place without involving the direct payment of bounties where the export trade is handled by the kartell as a whole, or it may result from—or be accompanied by—export bounties where exporting is left in charge of the individual members. The export bounty method in its simple form of a specific bounty granted upon each unit of the commodity exported has the defect from the point of view of the industry as a whole that it is inelastic and does not adjust itself to changing conditions. An export bounty which at its first introduction operates to bring about the desired distribution between sales in the domestic market and sales abroad may soon become too low, if foreign prices fall or domestic prices rise, to induce the proper volume of export. Or it may become too high, with the result that it leads to overexport at low prices or to special profits for the exporters, with the cost in either case falling on the industry as a whole. As a result, most, if not all, of the kartells using export bounties introduced flexible features. The amounts of the bounties were subjected to periodic revision, and were fixed at the point estimated to be sufficient to stimulate exports to the desired volume. In most cases the bounties were paid only upon proof of exportation, but some kartells, further to protect themselves against abuse, paid bounties only upon proof of exportation at a price less than the domestic price;[1] some of the kartells did not pay bounties unless the difference between export and domestic prices was substantial.[2]

Some of the kartells appear to have experimented with making the amount of the bounty equal the actual difference between the export and the domestic prices, but to have found this practice

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wrote as follows: "Aux traits caractèristiques des syndicats américains, il faut ajouter ce fait bien connu, c'est que les coalitions en Europe ont ordinairement deux prix, celui pour le marché interieur et celui pour l'exportation."—*Les Coalitions de Producteurs et le Protectionnisme*, Paris, 1889, p. 14.

[1] *Memorandum on the Export Policy of Trusts*, pp. 303, 304.

[2] This was the practice of the *Stahlwerksverband*, or steel kartells, U.S. Federal Trade Commission: *Report on Cooperation in American Export Trade*, 1916, Part II, p. 16. (This report will henceforth be referred to as *Cooperation in American Export Trade*.)

undesirable, because it made it a matter of comparative indifference to the exporting concern, within the maximum limits of the bounty, what prices it received on its export sales, and thus led to sales at prices lower than conditions warranted. To eliminate some of the abuses to which the bounty system was subject, many kartells either themselves took over the handling of the export trade, or exercised supervision over the prices at which export orders could be accepted, or granted bounties equal to only a part of the difference between domestic and export prices.

The years from 1900 to 1902 were in Germany, as elsewhere, marked by industrial depression. The decline in prosperity, coming as it did after a period of unprecedented activity, fell with particular severity upon the non-syndicated industries and upon the non-integrated kartells, i.e., those kartells which did not carry the manufacturing process through from the production of their own raw materials to the completion of a manufactured product ready for sale, but purchased their raw material from the primary-material syndicates such as the pig-iron and the coal and coke kartells. The non-integrated kartells attributed their distress in part to certain practices of the raw-material syndicates, and especially to their export policies. In 1901–2, the iron-using industries of Germany protested vigorously against the export-dumping of the pig-iron kartell, on the ground that it was impairing their ability to compete in foreign markets with foreign manufacturers using dumped German iron.[1] Another ground for complaint was that many of the members of the pig-iron kartell were themselves producers for export of more advanced commodities and were therefore in a privileged position, both in the domestic and in the export trade, in their competition with non-integrated German plants which had to pay to the pig-iron syndicate the high domestic prices exacted for their raw materials.[2] It has been claimed, however, that the German dumping of pig-iron in foreign markets did not appreciably lower the prices current there and that the pig-iron kartell was in all probability

[1] *Memorandum on the Export Policy of Trusts*, pp. 307, 308.

[2] Paul de Rousiers, *Les Syndicats Industriels de Producteurs en France et à l'Étranger*, 2d ed., Paris, 1912, pp. 146 ff.

dumping merely to meet the prices prevailing in outside competitive markets.[1]

Similar complaints had been made by iron and textile industries against the coal syndicate of the Ruhr as far back as 1891, and had resulted in the Prussian government warning the coal syndicate to cease its export dumping. In this instance a careful student gives it as his conclusion that the injury to German industries which was claimed to have resulted from this export dumping "seems to be alleged rather than proved."[2] Later, complaints of the same kind were made against the steel kartell (*Stahlwerksverband*) by German steel-tool makers, machinery manufacturers and shipbuilders and against the German wire syndicate by the German nail syndicate. There apparently was much better ground for some of these complaints, for the dumping of German steel and wire in Holland appears to have been an important element in the prosperity of the shipbuilding, machinery, and nail industries in that country, and in some cases enabled these industries to compete successfully with German producers in the German market itself.[3] The local chambers of commerce in Germany, whose membership consisted largely of independent small-scale producers of consumers' goods, repeatedly protested against the export policy of the great raw-material and intermediate-product kartells as injurious to the interests of the domestic manufacturers of finished products.[4] On these and other grounds, the Reichstag was petitioned in 1902 to institute state regulation of the kartells and the suppression of such of their practices as were dangerous to German industry. The question of regulating the kartells came up in the Reichstag for debate, and a motion providing that import duties should be lowered on goods produced by syndicates and sold at lower prices abroad than

[1] Cf. Robert Liefmann, *Cartells et Trusts*, Paris, 1914 (translated from 2d German edition), p. 102.

[2] Francis Walker, "Monopolistic Combinations in the German Coal Industry," *Publications of the American Economic Association*, 3d Series, V, No. 3, 225.

[3] Charles Longuet, *Des Syndicats d'Exportation en France*, Paris, 1909, p. 20; Josef Grunzel, *Economic Protectionism*, p. 323; Georg Gothein, "La Réglementation Internationale des Droits de Douane sur les Fers," *Revue Économique Internationale*, August, 1904, pp. 509 ff.

[4] André Sayous, *La Crise Allemande de 1900–1902*, Paris, 1903, p. 370.

in the domestic market was defeated by only a moderate margin of votes. The government responded, however, to the growing feeling of hostility to the kartells by appointing a commission to conduct an inquiry into their activities (the *Kartellenquete*). This commission carried on an extensive investigation lasting over three years. In the course of evidence given before it, it was "even asserted that manufacturing industries had been compelled to build establishments in foreign countries in order to take advantage of the marketing of raw materials abroad at low prices by the German producers' organisations."[1] The commission nevertheless recommended that there be no government interference with the kartells, on the ground that they had proved advantageous to Germany.

German consumers of pig iron had some time before, in self-defense, organized consumers' kartells. Either because of the pressure which these kartells exerted, or to forestall a more intensive campaign for governmental interference, or, perhaps, because their high domestic prices were appreciably checking their sales to German manufacturers for the export trade, the pig-iron syndicate in 1902 adopted the policy of granting rebates or bounties to domestic syndicated purchasers of pig iron for use in further manufacture for export.[2] There had been earlier instances of the occasional grant of such bounties to domestic purchasers: for example, by the pig-iron syndicate itself as far back as 1880, and by the coke syndicate in 1882.[3] As a systematic practice, it began in the iron and steel kartells and in various metallurgical trades in 1889 or earlier.[4] After 1902, it was an established phase of the price policy of all of the great kartells which resorted to dumping; domestic purchasers of their products for use in further manufacture for export were given the advantage of the lower export price, or were at least given some concession from the domestic price.

[1] Josef Grunzel, *op. cit.*, p. 323. Cf. also Willi Morgenroth, *op. cit.*, pp. 45–46.

[2] *Cooperation in American Export Trade*, Part 1, p. 207.

[3] Josef Grunzel, *Economic Protectionism*, p. 225; Paul de Rousiers, *Les Syndicats Industriels*, p. 149; Robert Liefmann, *Cartells et Trusts*, p. 111.

[4] A. Raffalovich, *Les Coalitions de Producteurs et le Protectionnisme*, p. 16; Paul de Rousiers, *op. cit.*, p. 149.

These bounties were sometimes passed on several times in the process of manufacture of a product ready for export. Thus the coal syndicate gave a bounty on each ton of coke used by the pig-iron syndicate in the making of pig iron either for direct export or for sale to domestic manufacturers for use in further manufacture for export; the pig-iron syndicate gave a bounty on pig iron used in the production of half-finished goods for export or for domestic sale for further manufacture and export; the wire-rolling mills received bounties on their materials used in manufacture for export and gave similar bounties to the wire-tack syndicate, and so on. In each case the bounty received was passed on, often with a further increase at each successive stage of manufacture.[1] The complications of this elaborate system of cumulative bounties necessitated the establishment of some co-operative machinery for its administration. In 1902 the coal, coke, pig-iron, bar-iron, and steel-beam kartells established a clearing-house for export bounties (*Abrechnungstelle für die Ausfuhr*) at Düsseldorf, where counter-claims could be settled and proof of export or of use in further manufacture for export could be examined.[2]

As a general rule, however, the bounties did not reach the domestic manufacturers for export of highly finished commodities, either because these manufacturers were not syndicated, or because the bounty arrangements did not provide for their being passed on through sufficient stages of the manufacturing process to reach them. Even where a domestic manufacturer for export received a bounty, it was often insufficient in amount to offset the difference between the domestic and the export prices of his raw materials. The extension of the bounties to domestic purchasers for use in further manufacture for export did not, therefore, completely succeed in attaining its purpose, if that was to prevent the dumping policy of the kartells from injuring the export trade of domestic producers of finished commodities, and it failed to reconcile these producers to the export dumping policy of the great kartells.[3]

[1] Great Britain, Ministry of Reconstruction, *Report on Trusts*, 1919, p. 42.

[2] Willi Morgenroth, *Die Exportpolitik der Kartelle*, p. 53.

[3] *Ibid.*, p. 58: "Eine weitherzigere Prämienpolitik wäre deshalb sehr am Platze"; p. 113: "Die drohendste handelspolitische Gefahr der Kartelle liegt eben in der Schwächung der Weiterverarbeiter."

The export dumping of the German kartells had as its predominant objective the maintenance at the same time of full production and stable and profitable domestic prices. The development of export trade was only a secondary consideration.[1] Export prices were made lower than domestic prices only when, and only to the extent, necessary to maintain aggregate sales, domestic and export, at near productive capacity. In boom times, therefore, it was occasionally unnecessary to cut prices in order to obtain export orders in the desired volume. At other times domestic orders were of themselves sufficient in volume to render unnecessary the artificial stimulation of exports. At such times the export bounties would be temporarily abolished, or would be greatly reduced.[2] It is not to be concluded, however, that the dumping was intermittent and recurred only at times of depression in the domestic market. Dumping was the normal, and the absence of dumping the exceptional situation in the export trade of most of the great kartells.

Sporadic or casual dumping, i.e., the occasional export of surplus stock already produced at whatever prices it would bring,

[1] Grunzel, *op. cit.*, p. 322, even claims that the kartells did not permit an expansion of export sales to lead to an extension of production facilities, the object of the dumping being the stabilization of domestic prices and of production, and not the expansion of the export trade for its own sake. Cf., also, *Cooperation in American Export Trade*, Part I, p. 206: "For the foreign market the [pig-iron] syndicate has fixed the export quotas of members so as to prevent unnecessary dumping."

[2] Thus the *Stahlwerksverband* stopped its bounties in 1906 because of active sales, but resumed them in the following year. (Robert Liefmann, *Cartells et Trusts*, p. 111.) The following statistics, which show a great increase in the quantity, but only a moderate increase in the value, of German exports of metal manufactures in the depression years of 1901–3 as compared to the preceding years, suggest that German dumping varied in extent in inverse proportion to the degree of business activity in the domestic market:

GERMAN EXPORTS

Year	Coarse Metal Manufactures		Other Metal Manufactures	
	Quantity (Thousands of Tons)	Value (Thousands of £)	Quantity (Thousands of Tons)	Value (Thousands of £)
1899	780	8,080	542	16,430
1900	793	8,795	610	18,865
1901	1,235	9,445	675	18,790
1902	1,313	9,170	914	20,845
1903	1,382	10,025	1,018	22,470

(From J. Ellis Barker, *200 Points for Tariff Reform*, London [1910?], p. 167.)

was of infrequent occurrence in Germany, partly because such surplus stocks, if they occurred, were disposed of in the course of the systematic and continued dumping, but mainly because German industry is conservative and rarely produces in anticipation of orders, so that overstocks are rare.[1]

Since 1914, the charge has frequently been made by writers hostile to Germany and all her works that much of the German dumping was actuated by predatory motives. Some writers have gone so far as to find in German dumping a manifestation of a deep-laid conspiracy between German government and industry to destroy the competing industries of foreign countries.[2] Such sweeping accusations are to be regarded with skepticism until convincing evidence is presented in confirmation. They are in large part merely one phase of the wartime plague of mendacious propaganda. It is significant that prior to 1914 capable foreign students of the export policies of the German kartells made no such sweeping charges against them[3] It is even more significant that within Germany itself opinion was very

[1] Cf. *Selling Foreign Manufactures in United States*, Part I, p. 64.

[2] Cf. Henri Hauser, *Germany's Commercial Grip on the World* (translated from the French by Manfred Emmanuel) New York, 1917, pp. 98 ff. In the Preface the author says: "Dumping, export bounties, import bonuses, combined sea-and-land transport rates, emigration measures—these are various measures which were employed by Germany not as the normal procedure of economic activity, but as means of strangling, crushing, and terrorising her adversaries." The translator, in his Introduction, finds the "true *casus belli*" in the belief of the German government that, although economic crises had been repeatedly overcome in the past by export dumping, the crisis which was impending in 1914 could be handled more quickly and cheaply by victory on the field of arms than by dumping and other methods of "economic penetration"! A comment made upon such charges by a British economist, although written long before the outbreak of the war, is still pertinent: "All the nonsense one hears about dumping as a 'national conspiracy' is derived from that fallacious idea which thinks of another nation as an industrial unit."—William Smart, *The Return to Protection*, London, 1904, p. 161.

[3] Cf. the British Board of Trade *Memorandum on the Export Policy of Trusts*, 1903, pp. 297–98: "It is of course easy to suppose a state of things in which a Kartell or a combination of Kartells might deliberately export at a low price with the principal or the exclusive aim of injuring and ultimately of entirely ruining and bringing to a close a particular industry in a foreign country. But it cannot be said that there is any clear evidence of such action on the part of the German combinations, whose export policy up to the present time appears to be mainly the result of supply exceeding demand in the German domestic markets."

much divided with respect to the effect on German economic interests of the dumping practices of the kartells. The agrarians, who were most influential in the councils of the government, were almost a unit in opposition to the export dumping of the kartells. Even since 1914, although anti-German propagandists have made much of the menace to the world of German dumping, very little evidence has been published which confirms the attribution to it of predatory motives. Granting the difficulty of discovering and demonstrating the character of the motives behind particular business practices, it still remains true that the preponderance of well-authenticated evidence strongly supports the conclusion that *in general* the German kartells dumped to dispose of surplus productive capacity and not to eliminate foreign competitors. The kartells, in fact, did their utmost to restrain German exporters from cutting their prices more than was absolutely necessary in order to obtain foreign orders. The great kartells commonly gave their bounties only to export kartells and not to individual exporters, in order to prevent export prices from being cut as a result of price-competition among the German exporters themselves.[1] The main explanation of the lowness of German export prices as compared to German domestic prices is that behind the shelter of a high protective tariff the kartells were exacting monopolistic prices in the domestic market, and that at these prices foreign business was not obtainable.

There is sufficient evidence, however, to justify the belief that in individual cases where circumstances favored German exporters cut their prices in order to weaken or destroy competitors or to force them to enter into some working arrangement with the German syndicate as to prices and markets. A. Mitchell Palmer, in his report as alien property custodian, charges German industry in general, and the chemical industry in particular, with predatory dumping intended to crush foreign competition and to establish a German world-wide monopoly. For so sweeping an indictment the evidence presented is somewhat scanty, but the report cites aniline oil, oxalic acid, and salicylic acid as commodities which

[1] Cf. Robert Liefmann, *Cartells et Trusts*, p. 112; Willi Morgenroth, *Die Exportpolitik der Kartelle*, p. 11.

had been dumped in the United States with predatory intent, and gives circumstantial details. Palmer makes the further charge that the German government facilitated the dumping of dyestuffs for military purposes, but he presents no supporting evidence.[1] Similar charges of predatory dumping were made against the German electrical industry by a British wartime committee.[2] An American consul reported in 1917 that German hardware exporters had dumped in the Turkish market with the aim of forcing out their French and British competitors.[3] Long before the outbreak of the war, it was alleged in England that German and American manufacturers of wire nails had dumped their products on the English market until the British producers were driven out of the industry, and had then raised their prices to English purchasers by more than they had previously reduced them.[4]

A well-substantiated and important instance of dumping with the deliberate intent of crushing the domestic industry in the market dumped on is to be recorded against the *Stahlwerksverband* in its export policy with respect to Italy.[5] A Swiss writer, in a careful study of the operations of the *Stahlwerksverband* in the Swiss market, supports in fairly convincing manner his accusation that here also this German kartell quoted extremely low

[1] *Alien Property Custodian Report*, Washington, 1919, pp. 30, 33.

[2] Great Britain, Trading with the Enemy Committee, *Report*, 1918 (C. 9059), p. 5.

[3] U.S. Dept. of Commerce, *Special Consular Reports*, No. 77, 1917.

[4] *Report of (Chamberlain) Tariff Commission*, Vol. I, *The Iron and Steel Trades*, London, 1904, p. 919.

[5] Cf. A. D. McLaren, *Peaceful Penetration*, New York, 1917, p. 90: "The *Organisationsgeist* has been at work there to oust rivals and competitors in the field of industry. The most interesting example was the German determination to kill the iron industry in Northern Italy, which the Italian Government strove so strenuously to foster. The mighty 'Stahlwerksverband' made herculean efforts to 'control' these Italian foundries, that is to say, to make them mere tools in the hands of the iron and steel magnates of Düsseldorf. Foiled in this attempt, it has tried to strangle them, as it has already strangled some of those in Scotland and Staffordshire, by dumping on a colossal scale." Cf., also, Maurice Millioud, *The Ruling Caste and Frenzied Trade in Germany* (translated from the French) Boston, 1916, pp. 104–7. The evidence is convincing that the *Stahlwerksverband* did make such an attempt. It was finally unsuccessful, however. After tremendous losses

prices with the main object of forcing out Swiss and English competitors.[1]

There is no reason to doubt that the German kartells would not have hesitated to engage in predatory dumping if it promised to bring results profitable to themselves. The evidence presented above demonstrates that they did occasionally resort to such dumping. It is even probable that predatory motives were a more important factor in German dumping than in the dumping of other countries. Such evidence as has been published does not support any more sweeping or dogmatic generalizations. It is easier to make charges than to substantiate them, and German commercial methods have unquestionably been painted in darker colors than the known facts justify. An instance in point was the accusation, so common during the war, that Germany—or German manufacturers, who in the polemics of wartime were often identified with the German government—was accumulating vast stocks of goods in order to dump them on the markets of the world, with the objects of crushing the new industries fostered by the wartime conditions, re-establishing her foreign commerce, and regaining in the field of economic warfare what she was losing on the military battlefield. These accusations have an interesting parallel in the similar charges brought against England after the Napoleonic Wars and the War of 1812,[2] but they appear to have had even less basis. It has become quite clear that there was not a vestige of truth in the reports of German warehouses bursting with goods ready to be dumped abroad. Germany

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had been incurred on both sides, the *Stahlwerksverband* and the Italian iron and steel syndicate shortly before the outbreak of the war signed an agreement in which the former agreed not to sell its products in Italy below certain specified prices. For an interesting and authoritative account by a representative of the Italian syndicate, see R. Ridolfi, *Il "dumping," considerato dal lato pratico oppure un caso tipico di "dumping,"* *La Riforma Sociale*, Torino, XXV (1914), 277 ff. and especially p. 283. I have not been able to find any confirmation of McLaren's statement that the *Stahlwerksverband* had "strangled" Scotch and English steel concerns by dumping.

[1] Eduard Feer, *Die Ausfuhrpolitik der deutschen Eisenkartelle und ihre Wirkungen in der Schweiz*, Zurich, 1918. See, especially, p. 181: "Die Billigkeit des deutschen Produkts ist deshalb in den meisten Fällen nur als Mittel zum Monopol zu betrachten."

[2] See *supra*, pp. 658 ff.

found herself at the end of the war without goods, financial means, or trade connections for a large-scale dumping campaign.[1]

The Germans have often been accused since 1914 of having resorted on a large scale to "credit dumping," or selling abroad on unreasonably long terms of payment without making proper charges for the deferment of payment. Foreign studies of German export credit practices, however, supply no confirmation for this accusation. The typical German practice of separating the financing of export trade from the exporting itself would make credit dumping difficult to carry out without elaborate arrangements between the export banks and the exporters.[2] Although the Germans, by an efficient organization of the function of financing export trade, were able to adjust the terms of the payment to the needs—or wants—of the different export markets or even of individual customers, they appear as a general rule, if not invariably, both to have charged interest for the longer terms and to have raised their basic prices to compensate for the greater credit risks involved in the longer terms.

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[1] Indicative of the reliability of wartime literature dealing with German commercial methods was the frequently made claim that the first anti-dumping law, that of Canada, was intended mainly to meet the menace of German dumping. (Cf. editorial in *Chicago Tribune*, August 30, 1916, and Walter E. Weyl, *American World Policies*, New York, 1917, p. 124.) The truth of the matter was that the Canadian law was directed mainly against American dumping.

[2] Cf. United States Department of Commerce and Labor; Bureau of Foreign and Domestic Commerce, Special Agents Series, No. 62; *Foreign Credits* (1913), pp. 19–34. Cf., especially, p. 20, "American customers, therefore, also receive the benefit of much lower prices in Germany than those quoted by Germans to their over-seas customers requiring long-term credit."

[*To be continued*]

THE AMERICAN-CANADIAN NEWSPRINT PAPER INDUSTRY AND THE TARIFF

In 1911 for the first time newsprint paper was admitted free of duty from Canada. Since then it has remained on the free list. During this same period the United States has moved from self-sufficiency in its newsprint paper supply to dependence on Canada for more than one-third of the paper it uses for printing its newspapers. Hence it is of significance to consider what would be the effect of removing the duty on the present relations of Canada and the United States with respect to newsprint paper.

Provisions of the tariff law.—The United States act of July 26, 1911, providing for reciprocity with Canada upon the passage of similar legislation by Canada, put newsprint paper, imported into the United States from Canada, on the free list. This was accomplished by Section II, which was unconditional and independent of the reciprocity provision of the act, and which remained on the statute books of the United States. The benefit of this section of the act was extended two years later by court construction to Germany and certain other European nations under most-favored-nation treaties.[1] This extension to other countries besides Canada of the privileges of sending newsprint, as well as wood pulp and other cheap grades of paper, duty free into the United States, is of interest as one of the rare instances of the United States granting substantial concessions to other countries because of her most-favored-nation treaties. A little later, in 1913, newsprint was placed unconditionally on the free list by the tariff act of 1913, which is in force at the present time (June, 1922).

Growth of the Canadian industry.—Placing Canadian newsprint on the free list has been a factor in the great expansion of

[1] *Court of Customs Appeals*, IV (1913), 146.

the Canadian newsprint industry in the last decade, and consequently in the rapid increase of our newsprint imports, for it was almost equivalent to providing territory for extending the domestic industry. Our imports increased from 1½ per cent of domestic production in 1909 to 65 per cent in 1921. Expansion of the American newsprint industry practically ceased after 1910, the increase in the domestic demand being taken care of thenceforth by the growing Canadian newsprint industry. The development of the latter from obscurity in 1910 to its present status of supplying in 1921 35 per cent of the newsprint used in the United States has been little short of phenomenal.

However, giving free entry to Canadian newsprint only hastened a little a process which was bound soon to begin in any case. American pulp-wood forests were being rapidly cut out. Tariff or no tariff, the point had been reached where it was profitable for American capital to build newsprint mills in Canada. Raising the tariff barrier which had operated against the exploitation of Canada's pulp-wood resources merely came at the psychological moment to hasten that process.

A detailed analysis of the relative costs of newsprint production in Canada and the United States from 1911 on will demonstrate the truth of this statement that the economic conditions were such as to lead inevitably to the expansion of the newsprint industry in Canada.

Comparative costs of production.—According to all comparative investigations that have been made, the average Canadian cost of production is lower than the average American cost. Table I, on page 683, shows the average cost of manufacture per ton of newsprint paper, not including depreciation allowance, for the United States and Canadian mills in 1910, as determined by the United States Tariff Board,[1] and for the years from 1913 to the middle of 1916, as determined by the Federal Trade Commission:[2]

[1] *Report on the Pulp and Newsprint Paper Industry*, United States Tariff Board, 1911.

[2] *Newsprint Paper Industry*, Federal Trade Commission, 1917.

In dealing with figures for average cost of production it must, of course, be borne in mind that the manufacturers are actually producing at widely varying costs. Thus in the United States the costs of thirty-five of the principal newsprint mills varied from $25.77 to $44.41 per ton for different mills in 1915 and from $24.93 to $46.94 per ton (including depreciation) in the first half of 1916. Nevertheless, average figures more or less satisfactorily represent the general trend of cost conditions.

It will be noted that from 1910 to the middle of 1916 there was a slow but unbroken decrease in the cost of production in the United States, and that the Canadian cost, although slightly higher in 1913 than in 1910, declined steadily from 1913 to 1916.

TABLE I

AVERAGE COST OF MANUFACTURE

	1910		1913		1914		1915		1916*	
	United States	Canada	United States	Canada	United States	Canada	United States	Canada	United States	Canada
Groundwood	$13.27	$ 8.49	$12.07	$ 8.54	$12.03	$ 9.06	$11.63	$ 8.65	$11.33	$ 8.47
Sulphite	8.63	7.41	8.02	7.97	7.64	7.68	7.47	7.01	7.33	6.74
Other materials	.84	.99	1.26	1.17	1.26	1.15	1.39	1.27	1.09	1.13
Total materials	$22.74	$16.89	$21.35	$17.68	$20.93	$17.89	$20.49	$16.93	$19.75	$16.34
Labor	3.27	3.19	3.49	2.75	3.51	2.60	3.41	2.54	3.34	2.36
Other costs	6.87	7.45	6.89	8.20	6.98	7.67	6.62	6.91	7.24	7.01
†Total costs	$32.88	$27.53	$31.73	$28.63	$31.42	$28.16	$30.52	$26.38	$30.23	$25.71

* Six months only. † Not including depreciation.

In April, 1918, it was estimated that the average cost of producing newsprint in all important mills in the United States and Canada combined had risen to $56 per ton. In the latter part of 1919, however, according to the Canadian government auditor, production costs in the more efficient mills of Canada was only about $50 per ton.

The estimate of the present cost differential in favor of Canadian newsprint mills as about 10 per cent is generally accepted. The last detailed comparison is the one presented in the foregoing table. In each of the years in question the Canadian cost was considerably lower than the American cost,

ranging from $25.71 to $28.63 per ton, in comparison with a range of $30.23 to $32.88 for the United States.

The items mainly responsible for this differential were groundwood and sulphite, although Canadian labor also was less expensive than American labor. The proportions of total Canadian to total American costs in the period covered and also the relative proportions of costs of raw material were as follows:

TABLE II

RATIO OF CANADIAN TO AMERICAN COST

Year	Total	Materials Only
1910	83.7	74.3
1913	90.2	82.8
1914	89.6	85.5
1915	86.4	82.6
1916	85.0	82.7

Canadian costs of material varied between 15 and 26 per cent lower than American costs of material, while the total cost of production ranged from 10 to 16 per cent lower in Canada than in the United States.

An idea of the relative importance of particular items entering into the cost of newsprint paper can be gained from Table III, on page 685, which shows the average ratio of the cost of each item to the total cost in American and Canadian mills combined in the first half of 1916:

Raw materials constituted over three-fifths of total expense, while the labor item of conversion of pulp into paper was only 10 per cent.

Plainly the country which has relatively cheap supplies of wood pulp has a great advantage, for the cost of groundwood and sulphite combined constitutes 58 per cent of the total cost of production, including a depreciation allowance.

Canada's advantage, then, lies principally in her lower cost of wood pulp. In the main, her newsprint mills use wood pulp made at a low cost by themselves, while American mills either manufacture their pulp at a higher cost than that of the Canadian

mills or purchase it at what is ordinarily a higher cost than that for which they could make it themselves.

Canada's lower wood-pulp production cost is, in turn, due almost exclusively to the lower cost of her pulp wood. There are several reasons for this: Canada has the advantage of greater accessibility to her pulp wood, with consequently a smaller expense for transportation. Spruce and other pulp woods

TABLE III

	Per cent	
Stock		
Sulphite	23.36	
Groundwood	34.30	
Miscellaneous	3.60	
Total		61.26
Conversion		
Labor	9.99	
Felts	2.51	
Wires	1.36	
Repairs	3.54	
Fuel	7.28	
Power and water rentals	1.08	
Miscellaneous	4.12	
Total		29.88
General expense		
Taxes and insurance	1.33	
General and administrative	1.96	
Total		3.29
Depreciation		5.57
Total cost		100.00

grow most plentifully in the regions where the logs can be readily floated to the mills on the numerous south-flowing streams of the provinces. This is a much less expensive method than rail transportation, which is necessarily used by most of the larger mills in the United States. Again, Canada has the immense advantage of being able to use pulp wood from the extensive stands of timber on Crown lands, the export of which to the United States and elsewhere is forbidden.

The Canadian provincial governments have encouraged development of pulp-wood areas by leasing Crown lands and water-powers at nominal rates, by establishing fire-protective systems, by building reservoirs at headwaters, and by certain beneficial regulations relative to tree cutting.

The saving in Canadian pulp-wood production cost is a result of saving in each of the three components into which the production cost of any commodity resolves itself—labor cost, return to capital, and the cost of the raw material in the ground, or wherever it originates. In the first place, the mere increase in Canadian wages to the United States level, which is generally admitted to have occurred, and an assumption of about the same average capacity on the part of the laborers of the two countries to work and to work efficiently, do not necessarily, and do not in this case, mean the same labor cost per ton. For Canadian mills, due to greater accessibility of Canadian pulp wood and the easier means of transportation available as compared with the United States, are able to dispense with a considerable share of the labor necessary for getting pulp wood to American pulp mills. It is just a case of using less labor per ton of output, not a case of using the same amount and paying each unit less.

Thus the labor cost of getting out the pulp wood in Canada remains smaller than in the United States, in spite of the fact that wages in the two countries may now be regarded as approximately equal and independent of the question of relative labor efficiency, which is a controversial one.

The other factors causing Canada's cost of pulp wood to be lower are the differentials in the other two components of production cost above mentioned. One is closely linked with the saving in labor cost—it is the saving on return to capital (tools, machinery, railroads, etc.) due to the fact that fewer services of capital are required in Canada to get the pulp wood to the pulp mill. The third, and probably the most important of them all, is the low cost at which most of the Canadian newsprint companies acquired large tracts of pulp-wood timber in Canada and the low cost at which they are able to hold it for future use, in contrast with the situation of certain important American

companies who are forced through their own inadequate holdings of pulp-wood stands and by the Canadian provincial pulp-wood export embargoes to shop at a handsome price for pulp wood from the reduced woodlands of the United States or from the fee lands of Canada.

It will be noted that in the main these three components of saving in pulp-wood production cost in Canada as compared with the United States have their basis in the advantages to the Canadian mills of accessibility to the pulp-wood areas and of freedom to use their large holdings of Crown-land timber, bought cheap, as well as in the advantages conferred through governmental interest in the development of the Canadian pulp-and-paper industry.

Another factor, in addition to the smaller cost of raw materials, apparently is in favor of Canada. In 1911 the United States Tariff Board found that on the average the efficiency of equipment was slightly greater in Canada than in the United States. In the last decade this efficiency differential has undoubtedly increased, for during that time Canada has multiplied her output many times through building new mills and installing up-to-date machinery, while very little extension of plant has taken place in the United States.

Table IV[1] compares the newsprint machines in Canada with those in the United States as they were about two years ago. The machines are divided in five classes according to their width. Machines up to 100 inches wide may be called small; 101 to 140 inches, medium-small; 141 to 170 inches, medium-large; 171 to 200 inches, large; and over 200, extra-large. The larger machines of both countries are employed almost exclusively on newsprint, while the smaller ones in a great many cases are often employed part of the time on other kinds of paper, such as book, sulphite bond, or wrapping paper. The wide machines operate usually at a very rapid speed. They are hence unsuited for making other types of paper like the above, of whose texture and strength more is demanded than that they shall have the minimum strength necessary to prevent the paper from breaking in the

[1] Compiled from Lockwood's *Directory of the Paper and Allied Trades.*

paper machine or the printing presses. This minimum strength is all that newsprint requires.

Since the data comprised in Table IV were compiled a number of large new machines have been installed in Canada and the United States. The table, nevertheless, affords a fairly accurate comparison of the sizes of Canadian and American paper machines.

It will be seen that Canada's machines, though naturally fewer in number than those of the United States, are on the average much larger In the United States 72.4 per cent of the newsprint machines were in the small and medium-small classes (up to 140 inches in width) compared with 40.4 per cent

TABLE IV

Inches of Width	United States		Canada	
	Number	Per cent	Number	Per cent
Up to 100	44	32.8	12	19.4
101 to 140	53	39.6	13	21.0
141 to 170	35	26.1	25	40.4
171 to 200	2	1.5	6	9.6
Above 200			6	9.6
Total	134	100.0	62	100.0

in the same classes in Canada. Canadian pre-eminence in the three larger classes is apparent. Of the machines in Canada, 9.6 per cent were of the extra-large variety (over 200 inches).

The two factors discussed—the lower cost of pulp wood to Canadian mills and the superior efficiency of Canadian paper-mill equipment—are apparently the only important differentials in Canada's favor at the present time, for wages are now about the same in the two countries. However, at the time the cost figures given above were compiled the factor of comparative labor cost was of some importance in causing Canada's paper production cost to be lower.

This factor has considerably greater effect on the total paper cost differential of the two countries than would be indicated merely by the fact that labor accounts for only 10 per

cent of the cost of converting pulp into paper. The percentage of cost of production of any commodity attributable to cost of labor increases the farther back one traces the processes of production. Compounding the amounts paid in wages during the various processes of conversion from the wood in the ground to the finished paper results, of course, in a figure for the proportion of total labor cost to total cost of production much larger than the proportion of labor in the single process of conversion of pulp into paper.

The tendency toward equalization of the wage scales of the two countries has probably been the principal factor in bringing Canada's advantage in 1916 of 15 per cent lower cost of newsprint production to what is now estimated as 10 per cent. The fact

TABLE V

	International Paper Co.	Canadian Export Co.		International Paper Co.	Canadian Export Co.
1920	Cents per Pound	Cents per Pound	1921—*Cont.*	Cents per Pound	Cents per Pound
First quarter	4.50	4.50	Second quarter	5.50	5.50
Second quarter	5.00	4.50	Third quarter	4.75	4.75
Third quarter	5.75	5.50	Fourth quarter	4.00	4.00
Fourth quarter	6.50	6.50	1922		
1921			First quarter	3.50	3.50
First quarter	6.50	6.50	Second quarter	3.50	3.50

that the Canadian and the American wage scales have been approximately the same, however, has no effect on the fact that less labor is required per cord in Canada than in the United States to get out the pulp wood from the forests and to the mills. The latter factor remains in Canada's favor.

Prices.—In spite of Canada's advantage in cost of production, American and Canadian newsprint prices in the American market are about the same. Table V, which gives comparative prices charged on their 1920, 1921, and 1922 contracts by the International Paper Co. and the Canadian Export Co., the principal purveyors of newsprint in the United States and Canada, respectively, shows how closely the American and Canadian prices hang together. The International Paper Co. usually takes the lead in price-making and the other companies, including

the Canadian Export Co., model their prices on the schedule announced by the International Paper Co. It will be noticed that during 1920 the prices of the latter tended to be slightly in the lead of those of the Canadian Export Co., but that they reached their peak at the same time and declined together.

The general tendency toward uniformity of American and Canadian newsprint prices is brought out also in the price figures for total contract sales in the American market by American mills compared with total contract sales in the same market by Canadian mills, as shown below:

TABLE VI

NEWSPRINT PAPER

(Data from monthly reports of Federal Trade Commission)

Month	United States Contract	Canadian Contract	Month	United States Contract	Canadian Contract*
1919	Cents per Pound	Cents per Pound	1920—*Cont.*	Cents per Pound	Cents per Pound
May	3.69	3.598	September	5.531	5.308
June	3.65	3.58	October	5.790	5.343
July	3.646	3.574	November	5.792	5.541
August	3.652	3.624	December	5.569	5.770
September	3.675	3.667	1921		
October	3.725	3.666	January	6.076	6.385
November	3.782	3.757	February	5.921	6.458
December	3.825	3.744	March	5.862	6.480
1920			April	5.409	5.507
January	4.362	4.267	May	5.248	5.497
February	4.533	4.569	June	5.227	5.322
March	4.577	4.556	July	4.770	4.824
April	4.726	4.817	August	4.762	4.758
May	4.673	4.457	September	4.586	4.388
June	4.752	4.550	October	4.188	4.069
July	5.211	4.938	November	4.194	4.002
August	5.371	5.306	December	4.102	4.018

* Prices paid by United States publishers.

Whatever the relative position of the two countries as regards production costs, it would hardly be expected that the prices in the two regions would differ materially when we consider that they cater principally to the same market. The conclusion to be drawn from the fact that it costs less to produce newsprint in Canada than in the United States but that approximately the same price is received for the product of each country, is

naturally that the Canadian industry makes greater profits than the American industry.

Canadian restrictions on pulp-wood exports.—Canada naturally wants to preserve the advantage accruing to her by reason of her superior pulp-wood stands. Another aim of hers is to preserve her forests. Moreover, she wants to develop her pulp-and-paper industry. Consequently the principal pulp-wood provinces for a number of years have forbidden exports of pulp wood from lands owned by the Crown, which constitute much the greater portion of total Canadian pulp-wood lands. These restrictions are fairly successful in their aim. They prevent Americans from obtaining cheap pulp wood from lands on which in some cases they have had leases from the Canadian government since before the restrictions went into effect. They protect the Canadian forests from too rapid depletion. They force American capital to manufacture pulp and paper in Canada. Of course, as far as the provinces succeed in building up a pulp-and-paper industry at home, they create a demand for pulp wood which makes their aim of forest conservation by just so much less effective. By and large, however, the restrictions seem to operate as a truly conservationist measure, aside from their industrial aspect.

The restrictive legislation, in outline, is as follows.[1] Exploitation of forest lands in the Canadian provinces is undertaken by individuals under several forms of tenure. Some lands are held in fee simple; in the case of timber or pulp wood cut from such lands no restrictions are placed upon the owner. He may sell the logs in Canada, the United States, or elsewhere as he sees fit. Other lands are retained by the provinces as Crown lands; on payment of ground rent and stumpage fees, private operators may secure a license to cut from such lands. Wood cut on Crown lands must be manufactured in Canada, export of it in unmanufactured form being unconditionally prohibited. This type of legislation was initiated by an order-in-council of the

[1] It should be clearly understood that the Dominion government in no way restricts or has ever restricted the exportation of pulp wood; the embargoes are an exclusively provincial affair.

province of Ontario in 1900. It applied first only to pine timber, then being exported in large quantities because of the depletion of the pine forests in the Lake states, but in 1902 it was extended to pulp wood. Similar orders-in-council were applied to pulp wood by Quebec in 1910 and by New Brunswick in 1911. British Columbia prohibits the exportation of logs or pulp wood or shingle bolts cut from Crown lands and, in the case of some Crown-granted lands, charges a manufacturing tax which is rebated if the logs are manufactured in Canada. There are no Crown timberlands in the province of Nova Scotia, and consequently no laws affecting the use of timber cut thereon.[1]

The restrictions named above have not gone unnoticed in the United States. Some large American interests which held leases on Crown-land pulp wood limits in Canada, and which depended to some extent on them for their pulp-wood supply, were rather suddenly forced by the passing of the orders-in-council to discontinue sending pulp wood from their Canadian limits to their mills in the United States. Consequently they were placed at a disadvantage compared with American mills which owned ample pulp-wood stands in the United States or leased lands in fee simple in Canada. In the last two or three years they have exerted pressure to secure the lifting of the embargoes. This pressure has had concrete result in two forms of federal legislation in the United States.

First, the Underwood Resolution, a joint Congressional resolution which failed to receive the assent of President Wilson but which was later signed by President Harding, provides for a commission of five men to present to the Dominion government or to the provincial governments of Quebec, Ontario, and New Brunswick, the claims of Americans holding leases on Crown lands, acquired prior to the restrictive orders-in-council, and to negotiate for the cancellation of such orders in so far as they apply to Americans. If the commission fails to secure this end by negotiations, it is to "investigate, consider, and report to Congress, what action should be taken to secure the cancellation of the orders so that they should not continue to

[1] *Canadian Pulp and Paper Association Bulletin No. 29.*

militate against the interests of the people of the United States affected by them." However, no action has yet been taken by the President to appoint this commission. It has been often stated openly in Canada that the pulp-wood embargoes are absolutely necessary for the economic welfare of the provinces concerned, and that the mere fact that certain American interests are adversely affected by these restrictions is insufficient ground for altering them. Feeling at times has run high in Canada on account of rumors that the United States intended to adopt a big-stick policy toward Canada. Unfortunately, some ground had been given for this fear by open threats of retaliation made at one time in certain quarters in the United States. The threatened retaliation was to take the form of embargoes on shipments to Canada of coal and sulphur, two necessary materials in pulp manufacture for which Canada is largely dependent on the United States. Hence in many instances Canadians feared that the Underwood commission would come prepared to threaten retaliation of this sort in case the provinces concerned refused to modify their embargoes. Even in quarters where these rather irresponsible threats of retaliation were discounted, it was stated in a very firm manner that nothing could induce the provinces to make their export restrictions any less rigid. The attitude of the Canadians remains uncompromising and the matter is at present in abeyance.

The desire for retaliation has expressed itself in another form of federal legislation on the part of the United States, namely, placing a duty on imports from Canada into the United States of the finished product into which Canada makes its pulp wood. The present tariff bill, passed by the House of Representatives and now before the Senate, provides for a 10 per cent retaliatory duty on newsprint from any country or part of a country restricting export of pulp wood to the United States.[1] This retaliatory duty, however, is to take effect only in case the president chooses to have it do so. When one considers the vast political power wielded by the press of the country, which imports from Canada more than a third of the paper it uses, it

[1] H. R. 7456, Title II, Section 201, Par. 1659.

seems at any rate somewhat doubtful whether this retaliatory duty will ever be invoked, assuming that the Senate retains the provision in unchanged form.

Relation of the Canadian to the American industry.—In order best to understand newsprint tariff issues between Canada and the United States, one should think of the American and Canadian newsprint paper industries as essentially one and the same entity, having the same principal markets and the same interests, modified only by protective tariff duties and export embargoes on the finished product or on essential raw materials. Geographically they form in the main one group of mills, being much more closely connected with each other than different portions of some other industries lying entirely inside the United States. To a certain extent they use raw material from the same source. A large part of the Canadian and the American newsprint mills are members of one association. Upward of 75 per cent of the capital invested in the Canadian newsprint paper industry is of American origin. The greater part of the newsprint trade between Canada and the United States is hence between Americans north of the border line and Americans south of the border line. More than 35 per cent of Canadian production is used by newspapers in the United States. As a result of these conditions we may regard Canada's development almost in the light of a northward extension of the domestic industry, taking place largely for the purpose of supplying American newspapers with newsprint. Yet the fact that Canada is a separate political unit has played a considerable part in accelerating the northward movement of the industry, through the Canadian provincial pulp-wood embargoes described above, which make Canadian Crown-land pulp wood unavailable to mills in the United States. Except for this stimulus to northward movement resulting from the Canadian prohibition of pulp-wood exports from Crown lands, the present condition is much similar to competition between two sections of the same industry, such as might exist between two geographical sections entirely within the United States, one of which has an average lower production cost than the other.

Nevertheless, even though our relation to the Canadian newsprint industry is not one that lends itself easily to adjustment through the tariff, it is fraught with great significance as regards the future of the industry. The Canadian industry is bound to become increasingly important, for the American industry is becoming more and more remote geographically from the main sources of pulp-wood supply, and Canada is determined to make the most out of her possession of large pulp-wood forests, keeping them as far as possible for her own industry to the exclusion of the American industry. American newsprint companies must manufacture increasingly in Canada, or at the least establish their pulp mills there, even if access to Canadian Crown-land timber is made freer.

The fact is, that except for certain companies in the United States which have adequate pulp-wood holdings in Maine and certain companies near the Canadian border which foresightedly provided themselves early with large tracts of freehold pulp-wood lands in Canada and because of their comparative nearness to these supplies can transport their pulp wood reasonably cheaply, the American newsprint industry, as far as it is confined to the northeastern portion of the United States, has seen the end of expansion for many years to come. Canada will almost inevitably soon produce more newsprint than the United States. In time Alaska and perhaps the Western part of the United States will develop newsprint production on an important scale. But they always will be handicapped by the fact that they are farther distant than eastern Canada from the main consuming markets.

Relation of transportation to the industry.—The factor of transportation together with the economies of integration of both the process of pulp-making and the process of paper-making are the ultimate factors determining the order of development of the pulp-wood areas of the world and the dates of moving on to new areas. Factors like sudden changes in tariff—for example, putting Canadian newsprint imported into the United States on the free list in 1911, and excluding the main pulp-wood supplies of one country from its more highly industrialized

neighbor—though exerting much influence on geographical shifts in the industry, are of minor importance in the long run.

The high cost of transportation of logs always causes the wood-pulp industry to be located near the pulp-wood forests; naturally the forests nearest the newsprint consuming centers are chosen. The newsprint mills themselves are then located close to the wood-pulp mills because of economies achieved thereby in the process of manufacture, and because it costs less to transport the finished newsprint than it does to transport the pulp. As the forests recede from the mills the tendency is for the wood-pulp mills to follow them. Artificial national influences such as tariff measures and pulp-wood embargoes tend to accelerate this movement, as they did beginning about 1910 in the case of the movement of American capital into Canada. As the pulp mills move toward the receding forests, the newsprint mills, though much more slowly, follow in their turn. They tend to stay near the pulp mill and yet the economy gained thereby is so much less proportionately than that gained through the pulp mill being near the pulp wood that the tendency is much less clearly defined.

Of course the foregoing tendencies toward migration of the industry are never carried to the full because of the fact that the pulp wood in any section is seldom completely cut out, and tends to grow in again, or is replanted. The demand for newsprint and other papers made of sulphite pulp and groundwood ordinarily is strong enough to insure such a return to pulp mills which get their pulp wood from the partly exhausted areas near them or else bring it at a heavy expense from a distance or to insure such a return to paper mills which bring their pulp from distant pulp mills, that it is not worth their while to tear up their costly immobile plants and move nearer the virgin forests.

Consequently we may expect the present newsprint and pulp mills in the United States to remain, but not to increase substantially in number nor to instal much new modern machinery. It is highly likely that agitation for reforesting and the present realization of our great need for pulp wood supplies will result

ultimately in some such crop system of pulp wood planting as is practiced in certain European countries. But even then a material advantage will remain with Canada. How vigorously later developed regions, such as Alaska, having the advantage of virgin pulp wood stands and the disadvantage of a long haul for the finished product, will be able to compete with regions near the eastern cities having the advantage of a short haul for the finished product and the disadvantage of a high price for pulp wood, is now dependent on too many uncertain factors to permit of prognostication. But as long as Canada has large virgin stands, and until, if ever, her forests reach the present state of exhaustion of the American forests, the newsprint industry of the United States must grant first place to that of Canada.

CONSTANT SOUTHWORTH

WASHINGTON, D.C.

SHIPPING FALLACIES

A person interested in ocean shipping from reasons other than the ownership of a few shares of the aqueous common stock of the International Mercantile Marine purchased at $51\frac{7}{8}$, has inevitably to rely on his own resources and must consequently often be at a loss. The American books on shipping can be numbered almost on the fingers of a one-handed man, and in none of them can an inquirer find answers to relevant and irrelevant questions which bother him: Why do some countries have large merchant fleets and others practically none? Why has the subsidization policy of Japan apparently succeeded and that of France failed? Why can Greeks buy eight-hand ships and make money with them while Americans cannot earn profits with the most modern types? Why have we had in this country an endless procession of marine leagues, national merchant marine associations, and the like? By what processes do so many ships, famous in the trans-Atlantic traffic, degenerate into steerage boats in the Near East trade and end their one-score years and ten among the odorous junks of the China Sea? Surely not unanswerable questions or lacking in appeal to the imagination.

Yet not only are the serious books on the subject unsatisfying to one afflicted mildly with intellectual curiosity (the authors confess that they are serious in their prefaces: one hopes that his book will be "conducive of proper action by Congress on the vital subject of an American marine"; another feels modestly "the need of a book dealing systematically and comprehensively with the whole subject of ocean transportation"; and a third admits that his "contribution" has on it "the stamp of individuality") but the speeches of the leaders in maritime affairs and the editorials in the native shipping journals are but slightly informative and are usually unsound. Being less acquainted with other fields of economic endeavor, I can state that to the

best of my knowledge there is no other in which such childish fallacies are mouthed continuously and in the end believed fanatically. Four of these popular opinions will be given a critical scrutiny: (1) The time-has-now-come fallacy; (2) the balanced-fleet argument from false analogy; (3) the delivery-wagon figure of speech; and (4) a defense of subsidizing tramp shipping by the *non-sequitur* reference to Japan.

To avoid an undue emphasis of the importance of the subject, every discussion of shipping should have in it somewhere the tonic statement of Salter:

> Merchant shipping has throughout history occupied both in the public mind and in the economic system of the world a place altogether out of proportion to either the human effort or the capital which it represents. The ordinary citizen of any civilized town enjoys in his daily life the products of every quarter of the globe. The very fabric of modern life is built upon the interchange of the goods of widely sundered nations. But the steamships by which the communications of the world are maintained and its products and manufactures exchanged have never exceeded in number some 8,000. Those employed in manning them amounted to some 450,000, and those in building them to perhaps another 250,000—small numbers compared with the 8,000,000 persons occupied in agriculture in a single country such as France. The total value of all the ocean-going ships in the world before the war was not more than some £300,000,000; that is, less than the capital invested in two English railway companies. The total amount of steel sunk in ships lost during the war was only some 5,000,000 tons; that is, not more than 12 per cent of the steel production of America alone in a single year.[1]

At the other extreme is the declaration of Chairman Lasker:

> As important as the railroads were in the wresting of the empire, so now, in the cycle of events, transportation on the sea becomes a paramount issue of the day, unless American statesmanship is bankrupt and American vision blind. Shall we, standing in our own light, surrender to others the wealth of opportunity which is ours, stupidly and blindly holding to fetiches of past conditions? Or, recognizing changes from within and without, shall we do that which is necessary to give our children the same opportunity that our fathers had and that came to us?[2]

In other words, pruning the oratorical verbiage, the time has now come when the United States must possess a large merchant

[1] J. A. Salter, *Allied Shipping Control*, p. 7.

[2] *Traffic World*, December 17, 1921, p. 1207.

marine. This fallacy is heard on all sides; it was stated solemnly at least a dozen times in the recent National Merchant Marine Association convention in Washington.

Why has the time now come? Have we ceased to be a large exporter of raw materials and foodstuffs, which ordinarily are carried in the ships of the nation buying them or in tramps, and rarely in the ships of the country selling them? Is the greater part of our foreign trade, from the standpoint of volume rather than value, in highly competitive articles that are discriminated against when carried in the ships of other countries? Is the inward volume of our trade now approximately equal to the outbound volume, so that more favorable rates can be made outward and better profits obtained from the whole business? Are the profits now to be derived from shipping as attractive as those derived from our domestic industries? Of course, none of these things has happened. The volume and direction of our trade are not appreciably different from what they were in 1914. The two significant changes from the pre-war status are the greatly overbuilt capacity of some of our industries, which may provide a larger surplus of exportation—or which may give work to additional wrecking crews—and the large number of ships now belonging to this country.

The only earnest attempt I have seen to back up this assumption with facts was made by one of the numerous experts at the Shipping Board. He argued that since in 1850, 55 per cent of the value of all American exports was foodstuffs and only 33 in 1919 and 25 in 1920, it was evident that the United States had irrevocably passed from the agricultural stage to the manufacturing state—whatever that may mean. Ergo, though this conclusion is interpolated, we now need ships.[1] (Incidentally, it is strange that unless a man goes three times a week to the publicity bureau of the Shipping Board to get the press releases, nowhere can he get such complete information of the happenings in and around that organization as in the "American Shipping Notes" of the British periodical, *Fairplay*.)

[1] *Fairplay*, November 17, 1921, p. 539.

I give this expert credit for groping after the essential elements of the case. His error lies in the use of values instead of tons, the latter of course not being available for the distant past. Stated explicitly, if I do him no injustice, he meant to argue that whereas this country had formerly exported bulky foodstuffs and raw materials, it is now exporting less of these than of miscellaneous manufactured products and that a case can be made today for American ships to carry the latter.

I attempt to arrive at a slightly different conclusion in a slightly different way. The most striking point brought out by recent statistics of the volume of our trade is its one-sided nature—a fact not surprising in view of the character and extent of our natural resources, yet consistently overlooked by those who are volubly insisting on the desirability of a large American merchant marine. In the year ended June 30, 1921, imports into the United States amounted to 36,000,000 long tons, as compared with exports of 58,000,000 tons; or, if bulk oil, which moves in specialized tankers, is excluded, the comparison is 17,000,000 to 52,000,000 tons.[1]

In shipping terms this disproportion means roughly that two-thirds of the cargo ships which go out loaded must return empty. Expressed in terms of ocean freight rates, this is the equivalent of saying that outbound rates must be high enough to pay for the return of the ships in ballast. Complaints are constantly made because rates from this country are much higher than to this country: when three ships are bidding for cargo enough for only one, and when vessels are faced with the necessity of buying ballast if no cargo is obtained, it is entirely logical to expect low rates on inbound traffic. This means that the low level of inward rates is an aid to foreigners in landing their goods at our docks, but makes more difficult the placing of our goods abroad.

In considering the shipping necessary for the success of our trade, it is essential to recognize that the 17,000,000 tons of oil imported and 35,000,000 tons of bulky raw materials exported

[1] *Commerce Reports*, September 26, 1921, p. 243; November 21, 1921, pp. 713–14. Figures for the ports are from these articles and the more detailed material in the Bureau of Foreign and Domestic Commerce, on which they are based.

must be considered separately.[1] As already pointed out, crude oil moves in specialized vessels which are an integral part of a very profitable business. The exports of heavy raw materials go largely in tramp ships, a type of service this country cannot logically be expected to develop. These raw materials normally move to the seaboard before being sold ultimately, so that it is difficult for the seller, even if so disposed, to divert his shipment to an American vessel. The inbound volume of cargo, excluding oil, practically balances the outbound movement, excluding coal, bulk oil, grain, cotton, and lumber. In the year ended June 30, 1921, the overseas exports of these commodities amounted to approximately 35,000,000 tons out of total exports of 58,000,000 tons, leaving about 23,000,000 tons of miscellaneous commodities which were nearly balanced by imports, exclusive of oil, or about 18,000,000 tons.

With no reference to these facts, the uncritical statement is made that the United States needs a merchant marine of 7,500,000 gross tons to carry 50 per cent of its products. A careful analysis leads me to the conclusion that all the cargo and passenger shipping we can support from the profits of their operation plus any subsidies which are likely to be granted, is the quantity of tonnage necessary to transport 50 per cent of our imports, excluding oil, and 50 per cent of our exports, excluding coal, grain, cotton, and the like; in other words, liner services for 50 per cent of our manufactured and semimanufactured products. Though why 50 per cent, one can with difficulty demonstrate. (As a matter of record it may be stated that when Mr. Edward N. Hurley was chairman of the Shipping Board, he called in one of his employees and told him to estimate the amount of tonnage this country needed. The employee asked, "To carry what percentage of our trade?" Hurley said he did not know, and countered with the question, "How much does the shipping of other countries carry?" "British shipping carries around 50 per cent," was the reply. "Let it be 50," Hurley said, and so it has been even to this day.)

[1] *Monthly Summary of Foreign Commerce of the United States*, June, 1921, Part I. Under the headings of the items named below.

On the basis of what has been outlined, it may be said—and here I generalize heavily in trying to get behind the stale arguments concerning comparative costs of operation, fixed charges, and the like—that a country which has been endowed liberally by nature with raw materials necessary to an advanced industrial development cannot maintain, except at an unusual expense, a merchant marine large enough to carry 50 per cent of its total trade. The exploitation of its natural resources will be more profitable than shipping ventures. The exportation of primary commodities will unbalance its trade, and the profitableness of trafficing in these articles, eagerly sought after by other less fortunate countries, will not make for the development of that peculiar genius of management and economy needful for the successful operation of ships on multilateral voyages. In other words, tramp ship operators will not be developed. Tramps are needed for bulky materials, and are usually operated by the country which must import heavy raw materials and foodstuffs. The reverse is that these materials are rarely carried in the ships of the country selling them. The United States is an example of a raw-material exporting country, at least three-fifths the weight of our exports belonging to this class. Spain is another case. Imports into that country in 1920 were 3,700,000 tons, as compared with exports of 8,700,000.[1] A large part of the outward movement was a raw material—ore; and Spain has little shipping. Argentina and the other South American countries are also cases in point.

Countries poor in natural resources are forced into lines of activity which do not pay so well as exploiting the gifts of nature; in the main, international trade and services. Of these activities, the shipping industry is inevitably one of the most important. The return from the shipping of countries poor in raw materials but advanced industrially is generally equal to that obtained from other ventures. It is necessary for such countries to bring in bulky raw materials which pay something toward the expenses of a ship's operation, and which consequently enable lower outward rates to be made on its finished products and a better profit

[1] *Commerce Reports*, December 5, 1921, p. 849.

to be made from the transaction as a whole. The United Kingdom, quite apart from its geographic location, is an example. Exports from the United Kingdom in 1913 amounted to 106,400,000 tons, of which 76,000,000 tons were coal. Imports totaled 55,400,000 tons. If the continental coal trade is excluded, and it should be because it is little more than a coastwise movement, the overseas movement was 57,300,000 tons outward and 55,400,000 tons inward.[1]

While the rapid growth of the Japanese merchant marine has been due to many factors, one of which was heavy subsidies, geographic and economic conditions favor an expansion of Japanese shipping; a strategic position with reference to Asia and a crowded population forced either into industrial activity for which bulky materials must be imported or into wholesale emigration. The volume of Japanese imports in 1913 almost balanced with the volume of exports. On the basis of the more important items, imports were 5,300,000 tons as compared with exports of 4,600,000 tons. It seems necessary for a country which must depend upon the importation of essential commodities to maintain a large merchant fleet. A country which possesses abundant natural resources has not the same need; other countries will come to its doors to buy.

As to the question of a balanced fleet, Dr. Emory R. Johnson, in a speech before the American Society of Civil Engineers,[2] gravely argued that we need more (*a*) passenger and mail vessels of 15,000 gross tons and up, with speeds of 18 knots and over, (*b*) passenger and cargo vessels of 10,000 to 15,000 tons gross, with speeds of 14 to 16 knots, (*c*) fast cargo vessels of 9,000 dwt. and up, with speeds of 12 knots and over, (*d*) refrigerator vessels of 8,000 to 12,000 tons gross, with speeds of 14 to 16 knots, (*e*) vessels propelled by Diesel engines or by Diesel electric drive. Why? Because we have not so many of these types in comparison with the British!

The question of a "well-balanced merchant marine" is a catchy phrase now taken quite seriously by the Shipping Board.

[1] *Supreme Economic Council Monthly Bulletin of Statistics*, Vol. II, No. 3, p. 29, and *Trade and Navigation of the United Kingdom*, I (1913), 319.

[2] *Marine Journal*, February 11, 1922, pp. 17–18.

In the report of the Shipping Board's committee of "best minds" on the ideal constitution of our fleet, it was stated that the British merchant marine was taken as the criterion. To argue that because the British have a certain percentage of a particular type of vessel, the United States should have a similar percentage, is as logical as arguing that since the South Sea Island mademoiselle wears two-pound rings in her ears, the flapper on Fifth Avenue should do the same. The rational way of determining the ideal constitution of a merchant fleet of a country is to study the character, extent, and direction of its trade and to estimate the kind and quantity of ship tonnage necessary to meet its requirements. Even here one is forced to admit that the shipping of a country is not developed according to ideal specifications, or rather has not been.

In the British merchant fleet are many small colliers, a special type evolved for the nearby continental coal trade, a type which this country does not need for its foreign trade. Similarly, many colliers have been designed and built for the ore trade from Spain, North Africa, and the Mediterranean islands to England. It is difficult to see, on the basis of available facts, why this country needs many ships of this kind, though, as is generally known, the Bethlehem Steel Company is building a few special ships for the importation of its ore and will doubtless build more when it has more ore to import.

Since the United Kingdom must import large quantities of frozen and chilled meats, there have been constructed a number of refrigerator ships to trade with South America and Australasia. When the learned committee and Dr. Johnson claim that this country needs a large number of refrigerator ships because we have not so many in proportion as the British, they talk nonsense. We have developed a fleet of refrigerator ships to bring bananas to this country; we may need a few more within a few years to carry citrus fruits abroad, a few might today be profitably employed in transporting fruit from South Africa and the west coast of South America to this market in the off season, and a few doubtless will be remuneratively used in carrying Pacific coast fruit through the Canal to Europe. These will be built in response to a demand, not previous to the demand to fill out a

paper plan. When the tale is counted, I believe, in the absence of proof to the contrary, that this country does not need the same percentage of refrigerator ships in its merchant fleet as the British.

When the economic factors of the situation demanded it, the United States built a large fleet of tankers. Today our vessels of this type outnumber those under the British flag. The increasing inability of the domestic production of crude oil to meet the domestic demand makes this country dependent on overseas sources of supply and we build tankers, exactly as the British depending on overseas sources of supply for meat built refrigerator ships. The British have not built tankers as rapidly as we have because their need for crude oil has not grown as rapidly as our own.

When the question of combined passenger and cargo ships is discussed, the issue is not so clear. However, it is evident that the quantity of ships of this character needed for our merchant fleet should be determined by the economic requirements of the case rather than by an argument in analogy with the British fleet. Before it can be confidently stated that our fleet is badly balanced, or that we need more passenger and refrigerator ships, a careful study of the trade facts is absolutely essential. Such a study I have yet to see, though I have seen many beautiful tables analyzing the British merchant fleet.

In an address delivered before the Cincinnati Chamber of Commerce on February 17, Senator Ransdell, the organizer of the National Merchant Marine Association, and a persistent speaker on shipping matters, stated, "American ships are your delivery wagons," a statement elaborated in this wise: A department store does not allow its goods to be delivered by a rival, and *pari passu* we should not let our foreign trade be carried in the ships of competing nations.

There is a grain of truth in this delivery-wagon figure; and a great many untrue implications. As a matter of fact, the reverse can be plausibly argued. If one forgets for a moment that shipping as a common carrier is not much over a hundred years old, a fact that is ordinarily forgotten, he can point out that when

countries have needed certain articles they have built ships and gone after them. The Greeks sought the Golden Fleece, the wheat and wool of Russia. The Phoenician and Roman ships went to England for tin; perhaps they took purple dyes and other ephemera to use in exchange but they sent ships after what they lacked. The Venetian galleys went after the rich products of the East because Venice and the hinterland wanted them. And so with the ships of the Hanseatic League, of Holland, etc. The modern British ships go to Australia, to Argentina, and to America to get what Great Britain needs: grain, meat, raw materials. That these ships go outbound laden with British products is true, but the exports are subsidiary to the imports and dependent on them. In other words, as pointed out above, the country that lacks foodstuffs and bulky raw materials in general builds ships and goes after them. It might be argued with some conviction that, historically, shipping has developed as an aid to a country's import trade. Certainly the view that a merchant marine is indispensable to export trade is not much more than a century old. It appeared after the results of the Industrial Revolution began to make it necessary for manufactured and semimanufactured goods to be marketed abroad. The only large exceptions I think of are, first, British coal, and second, Norway and Greece with their hundreds of ships engaged in trade between foreign countries. It might be argued here that the outward carriage of coal has merely made British shipping more profitable and that, in the absence of coal, British ships would nevertheless have been built and sent out for food and raw materials. I realize that this is skating on thin ice. I do not intend to be conclusive, but suggestive to those who have a better equipment and opportunity to pursue the matter.

I believe that the delivery-wagon argument is applicable to some extent to certain liner services necessary to carry our manfactured and semimanufactured articles, which meet severe competition abroad and which may be seriously discriminated against if carried in foreign ships, though I am perhaps wrong here.

When Dr. Johnson, with this delivery-wagon argument in his mind, says that "the country having the largest merchant

marine has an advantage in international trade,"[1] I am skeptical. His statement assumes a degree of correlation between trade and shipping measured in some common unit. As a matter of fact, on the only basis I know for such a comparison, the facts do not bear him out. Norway, which before the war stood first in tons of shipping per capita, was seventh in trade per capita and Holland which was first in trade per capita was fourth in shipping per capita.[2] I point out these facts for what they are worth. This unsupported dictum is not conclusive to me. There are many other factors that must be considered.

In the light of what has been said, only a brief reference to the fourth fallacy is necessary. It is argued that since Japan subsidized tramp shipping and succeeded measurably, we should adopt a similar policy. This statement sounds plausible, but flies in the face of logic. Japan needed tramp shipping. Dependent on overseas sources for raw materials and supplies, Japan found it necessary to encourage the kind of shipping which would insure a continuous flow of these articles. If its policy of subsidization was successful, it was because of an underlying economic need. Government aid merely hastened the development. It cannot be demonstrated, or at least it has not been demonstrated to my knowledge, that this country needs tramp shipping, and any argument in analogy with Japan on this point leaves me strangely unmoved.

That the lay economics on any subject will ever be logical and sound is extremely doubtful. A line of reasoning such as the foregoing, in which an attempt is made to get at the trade facts in the case, is popularly refuted by one or two sure-fire rejoinders. The proponent of ideas of this variety is either spreading insidious propaganda in the pay of British shipping interests, or is hired by the railroads, those iniquitous corporations which for decades have throttled our shipping. Being guilty of neither indictment, nevertheless I am shent in advance.

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[1] *Marine Journal*, February 11, 1922, p. 17.

[2] "Ocean Shipping," *H. R. Document No. 2112*, p. 9.

THE TAXATION OF INCOMES IN OKLAHOMA

I. A BRIEF HISTORY OF INCOME TAX LEGISLATION IN OKLAHOMA

Oklahoma passed its first income tax May 26, 1908, shortly after its admission as a state of the Union. The law required the assessor, at the time of making the assessment of real and personal property, to demand of each person a statement of his income in so far as it exceeded $3,500. The blank to be filled out contained this question, "Was your gross income from salaries, fees, trade, profession and property upon which a gross receipt or excise tax has not been paid, any and all of them for the year ending June 30, last preceding, in excess of $3,500?" If the answer was in the affirmative the person filled out a blank certifying the amount of the taxable income, the assessor also signed the blank, then forwarded it to the state auditor, who in turn certified the amount of the tax due to the proper county clerk. The tax was then extended on the rolls in the same manner as other property. The township assessors were required to furnish the state auditor a list of all persons subject to the tax and who had made the declaration together with the names of other persons who, in their opinions, might be liable for income tax. The state auditor was given power to subpoena witnesses and to take other steps to ascertain whether such persons ought to make returns.[1]

The rates were levied on gross incomes of persons except in the case of incomes derived from property upon which a gross receipt or excise tax had been paid. The following table[2] illustrates the gradation of rates employed.

Amount of Taxable Income				Rate
From	$ 3,500 up to	$ 5,000	.....	½ of one per cent
In excess of	5,000 and up to	10,000	.....	¾ of one per cent
In excess of	10,000 and up to	20,000	.....	1⅛ per cent
In excess of	20,000 and up to	50,000	.....	1½ per cent
In excess of	50,000 and up to	100,000	.....	2 per cent
In excess of	100,000		.....	3⅓ per cent

The revenue derived from this tax was added to the common school fund. It was unlawful to print or publish in any manner any income

[1] Kennan, K. K., *Income Taxation*, p. 225.

[2] Revised Statutes of Oklahoma, 1910, Vol. II, Art. XVII, sec. 7532, p. 2049.

tax return or any part thereof, and penalties for false swearing or failure on the part of the assessor to perform his duty were provided. However, in spite of these precautions the law was a complete failure, as far as producing revenue was concerned. The following figures indicate that the law was well-nigh universally ignored.[1]

Year	The Revenue Produced by the Income Tax Law of 1908
1909	$2,816
1910	4,913
1911	4,671
1912	4,834

In 1912 the state auditor recommended that the law be either thoroughly revised or repealed. In 1915 the legislature made a drastic revision of the whole law, virtually enacting a new income tax law.

II. OUTSTANDING FEATURES OF THE PRESENT OKLAHOMA INCOME TAX LAW

The 1915 law was similar in many respects to the federal act. However, in view of the fact that the law is the result of many compromises, it does not exactly follow any particular mode. It provides for a graduated income tax upon the net income of individuals only; it does not apply to the incomes of corporations as do some of the other state income tax laws. Private corporations and banks are assessed upon the net value of their moneyed capital,[2] surplus and undivided profits, as the same is entered on the first day of March, and the assessed valuation of any real estate located in the state owned by the corporations and listed separately.

The properties, equipment, etc., of oil and gas companies are subject to the general property tax. In addition to the ad valorum tax on property and assets, common carriers, public utilities, oil and gas companies pay a gross revenue tax, the rate varying according to the nature of the service performed. Those corporations which do not pay a production income or gross receipt tax pay a license fee varying with the size of their capital. The rate is higher on foreign than on the domestic corporations. The present personal income tax is an addition to the other taxes, as no credit is allowed for other taxes

[1] Comstock, Alzada, *American Economic Review*, X, 2, p. 263.

[2] "Moneyed capital" includes money actually invested in the business whether represented by certificates of stock.

which have been paid. The income of municipal bonds of the state of Oklahoma is taxable under the income tax law.[1]

The law applies both to residents and to non-residents who receive a taxable income from Oklahoma sources. The income tax blank sent out by the auditor indicates ten possible sources for gross income, viz., (*a*) salaries and wages; (*b*) professions and vocations; (*c*) business, trade, commerce, or sales or dealings in property, "whether real or personal"; (*d*) rents; (*e*) interest on notes, mortgages, bonds, bank deposits or evidence of debt of any kind whatsoever; (*f*) dividends on stock of corporations, joint stock companiesass and ociations; (*g*) fiduciaries (income received by guardians, trustees, executors, administrators, agents, receivers, conservators or other persons acting in a fiduciary capacity); (*h*) partnership gains and profits whether distributed or not; (*i*) royalties from mines, oil wells, patents, franchises or other legalized privileges; (*j*) all other sources not enumerated.

Section one of the act states that each and every person in the state shall be liable to "an annual tax upon the entire net income of such person arising or accruing from all sources during the preceding calendar year, and a like tax shall be levied, assessed, collected and paid annually upon the entire net income from all property owned and all other business, trade or profession carried on in this state by persons residing elsewhere." In order to determine the net income, it is necessary to subtract certain allowable deductions from the gross income. Under "General Deductions" the income tax blank provides for seven classes of deductions,[2] viz., (*a*) the amount of all necessary expenses actually paid within the calendar year for which the return is made, in carrying on any individual business. This item must not include personal, living, or family expenses. Amounts paid for permanent improvements or betterment of property are not proper expense deductions. Donations are not proper deductions according to the income tax blank; (*b*) all interest paid within the year on personal indebtedness; (*c*) all state, county, school, and municipal taxes paid within the year—not including those assessed against local benefits and federal income tax; (*d*) losses actually sustained during the year incurred in trade, or arising from fires or storms and not compensated by insurance or otherwise. Payments for oil and mining leases are termed investments and not proper deductions if the lease

[1] *Bunn's Annotated Supplement of the Revised Laws of Oklahoma*, sec. 7302, p. 1023.

[2] Oklahoma State Income Tax Blank, S.E. & I. Form 1247. (1922.)

is still held. In connection with this item the taxpayer is required to show three facts; viz., (1) of what the loss consisted; (2) when it was actually sustained; and (3) how it was determined to be a loss. The knowledge of these facts gives the auditor a check and no doubt aids him in determining the accuracy of the report; (*e*) debts due to the taxpayer actually ascertained to be worthless and charged off at the end of the year. In connection with this question he is required to state four facts, viz., (1) when the debts were created; (2) of what the debt consisted; (3) when the debt became due; (4) how they were actually determined to be worthless. These data are to be presented on a separate sheet. (*f*) An amount representing a reasonable allowance for exhaustion, wear and tear of property arising out of its use or employment in business. The auditor's instructions specifically prohibit the deducting of wear and tear, gasoline and upkeep on pleasure cars. The taxpayer is required to give two facts in connection with this item, viz., (1) what the property was on which depreciation was taken; if buildings, the date of construction, material used, and the value as of January 1st of the calendar year for which the report is made, must be given; (2) what per cent of depreciation is claimed. The 1921 amendment provided that depletion on mines and oil wells should be computed under the rules and regulations in force and from time to time adopted by the Department of Internal Revenue of the Government of the United States. In no case, however, may a greater depletion amount be allowed the taxpayer by the state of Oklahoma than is allowed by the United States Government against federal income taxes upon identical property.

From the net income computed as described above, the taxpayer is allowed certain other deductions, viz.,

a) A specific exemption of $3,000 to an individual;

b) However, if the individual is living with his or her spouse an additional exemption of $1,000 is allowed. In other words the two are allowed a total exemption of $4,000.

c) In addition to the above exemptions, the taxpayer is entitled to an exemption of $300 for each child under the age of 18 years.

d) For each child and every person for whose support the taxpayer is legally liable, an additional exemption of $500 is allowed while the child or person is engaged in acquiring an education, while only $200 additional is allowed in all other cases.[1]

[1] The taxpayer is to state on a separate sheet, when he returns his income blank, (*a*) the number of dependents; (*b*) the age of each; (*c*) the number engaged solely in acquiring an education, and (*d*) the legal liability of the taxpayer to support each of the dependents.

Having computed the total net taxable income by subtracting the sum of the general deductions and the specific exemptions from the gross income, the present law provides that the net income tax shall be computed in the following manner, viz.,

a) On the first $10,000 in excess of the exemptions and deductions 7½ mills;
b) On the next $15,000 in excess of the exemptions and deductions 15 mills;
c) On all amounts in addition to (*a*) and (*b*) 20 mills on the dollar.

The tax is computed by adding together the amounts payable under each of *a*, *b*, and *c*.[1] These rates are much lower than the rates in the original law of 1915. The following table gives a summary statement of the development of the present graduated scale, i.e., the scales of the laws of 1908, 1915, and 1917.

1908*			1915		1917	
Amounts in excess of	and less than	Rates (Mills)	Amounts	Rates (Mills)	Amounts	Rates (Mills)
$ 3,500	$ 5,000....	5	First $10,000...	10	First $10,000...	7½
5,000	10,000....	7½	Next $15,000...	20	Next 15,000...	15
10,000	20,000....	12	Next 25,000...	30	All amounts in	
20,000	50,000....	15	Next 50,000...	40	excess.....	20
50,000	100,000....	20	All amounts in			
100,000	and above....	33⅓	excess.....	50		

* The 1908 rates were on the gross income while the 1915 and 1917 rates apply to net incomes. In any case the tax was computed by adding together the amounts payable under each of the classes.

These various schedules of graduated scales indicate that the legislature of Oklahoma has been experimenting in order to find the most satisfactory combination of rates and amounts subject to the various rates. The 1915 law provided an initial rate which was regarded as too high while the number of classes was greater than circumstances warranted. As a result in 1917 the legislature reduced the number of classes from five to three and at the same time reduced the initial rate from ten mills to seven and a half mills and cut the maximum rate from fifty mills to twenty mills. As a result of these changes the effectiveness of the tax was greatly reduced. While the tax retained its graduated features the greater burden fell upon the incomes between $4,000 and $30,000, as all incomes in excess of the first $25,000 of taxable incomes paid a flat rate of 2 per cent. As compared to other state income tax laws, the Oklahoma statute provides for a much higher exemption, i.e., $4,000 for a married couple, $300 additional for each dependent and $500 additional if the dependents are engaged in getting

[1] Session Laws of 1915, Chap. 164, p. 286 f.

an education. The legislature was probably influenced in setting its exemptions high by the presence of many people in the state with relatively high incomes derived from the oil industry, while the relatively low incomes of the masses were not taxed. The high cost of living in the state no doubt also influenced the legislature in making the exemptions high.

The law makes no specific provision for the exemption of gifts or of proceeds of life insurance policies, as is done in some of the state income tax laws. Evidently these incomes must be counted as part of the gross income as Article XVII, sec. 7537*e*, subsection *f*, states, ". . . . and all other income of any kind derived from any source whatever, except such as is exempt from taxation hereunder by some law of the United States or of this state,[1] shall be included in the term 'income.'"

Non-residents receive the same treatment as residents as far as their property in Oklahoma is concerned. The Supreme Court of the United States decided that a state may impose an income tax on the income accruing to non-residents from their property or business carried on in the state. Therefore the Oklahoma Law is not invalid for want of jurisdiction.[2] It was also decided that the Oklahoma law does not deny non-residents the privileges and immunities to which they are entitled and the equal protection of the law; in fact it permits residents to deduct from their gross income losses incurred within or without the state, while non-residents may deduct only those incurred within the state. Thus non-residents are taxed only on their income from sources within the state while residents are taxed on the income from all sources.

The law makes no provision for credit for taxes paid by a resident on income received from without the state which may have already paid a tax. He must pay on his entire net income. Thus a person living in Oklahoma who receives part of his income from property in Missouri would be forced to pay two state income taxes upon the same income, provided of course that it was large enough to be classed as taxable income On the other hand if he lived in Missouri he would be allowed—under the Missouri income tax law—an offset for a certain amount paid in Oklahoma. When the law was first passed there was objection that it was unconstitutional because it provided for taxation

[1] *Bunn's Annotated Supplement*, p. 1028.

[2] In Shaffer v. Carter, 252 U.S. 37.

of incomes from oil property which property was already paying a gross production tax. The U.S. Supreme Court[1] held that even if the income tax constitutes double taxation, as applied to producers of oil and natural gas, paying a gross production tax, it does not violate the Constitution so long as such taxation is not based on arbitrary distinctions. In the case of gains of partnerships the taxpayer must count the gains as part of his income whether they are distributed or not. The amendment of 1921 allows a deduction not to exceed 15 per cent on the taxpayer's net income for charitable donations.

Administration of the income tax law is in the hands of the state auditor, who provides the blanks which are filled by the taxpayer and returned to the auditor's office. If any person liable under the law fails or refuses to make, or if he makes a false return the state auditor may give him 10 days' notice to appear before him in his office with books of account showing the condition of his business during the year. If the individual refuses to do this, the auditor may apply to the District Court of Oklahoma County or any judge thereof for an order requiring compliance. If it is found that the person has been guilty of attempted fraud or evasion, there is added to his tax as a penalty, $5 per day for each and every day the person has refused to comply—after March 15. Each individual's report must be filed on or before March 15, in the auditor's office. The 1915 law set March 1 as the date, however, in order to bring the state date as near as possible to the date for making the federal income tax return, the change was made. The tax becomes due June 15, and is delinquent if not paid on or before July 1.

The effect of the change in the law in 1915 is clearly shown in the change in the amount of revenue received. The revenue for 1910, 1911, and 1912 was $4,915, $4,671, and $4,834, respectively, while the revenue collected in 1915 and 1916 amounted to $250,000 and $400,000, respectively. However, the amount collected in 1916 was only 1.5 per cent of the entire amount of tax revenue collected in Oklahoma, yet it was greater than the total revenue produced by the income tax during the preceding seven-year period.[2] If the receipts from the state income tax are compared with the receipts by the federal government from personal incomes in Oklahoma, the latter tax appears much more productive, i.e., the federal government collected $4,347,797 in 1916, $5,682,493 in 1917, $7,649,280 in 1918, and

[1] *Ibid.*

[2] Comstock, Alzada, *American Economic Review*, X, 2, p. 262.

$12,207,129 in 1919. That is, the federal government received approximately ten times as much revenue from personal incomes in Oklahoma in 1916 as the state. In 1919, 3.03 per cent of the population made returns to the federal government, reporting an average net income per return of $3,937.96 with an average amount of tax paid per return of $198.49. In 1918 there were 7,009 returns on incomes from $3,000 to $4,000, 4,688 returns on incomes from $4,000 to $5,000, 1,721 returns on incomes from $5,000 to $6,000, and 1,010 returns on incomes from $6,000 to $7,000. The number reporting returns was much greater in 1918 than in 1916; for instance, there were only 384 returns in the $3,000 to $4,000 class in 1916. In view of the great increase in returns and in the amount of the tax in the case of the federal income tax, it might be expected that the state income returns and collections would show the same great increase. Whether this is true or not cannot be stated as the reports of the state auditor are not available. Repeated attempts have been made by the writer to secure these data. But the legislature of Oklahoma failed to make an appropriation for the publication of the auditor's report in sufficient quantities for distribution, and private correspondence likewise brought no information. The general impression, however, seems to be that the state income tax is not producing nearly as much revenue as it should. The high exemptions and the low rates in themselves would cause a relatively low yield. The administration of the tax by the auditor's office, without special district officers to aid in applying the law in the various localities, leads to evasion and consequently to a low yield and unsatisfactory results in general.

To summarize, the Oklahoma income tax law provides for a graduated tax, with comparatively low rates and high exemptions, on the net personal incomes of both residents and non-residents. The administration of the tax is entrusted to the state auditor. The 1908 income tax law proved a failure as a revenue producer, while the present law has brought in much more revenue. But owing to inadequate machinery for administration and to the high exemptions and low rates, this law has not produced the amount of revenue which its proponents expected.

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BOOK REVIEWS AND NOTICES

History of Life Insurance in the United States in 1870. By CHARLES KELLEY KNIGHT. Privately printed, Philadelphia, 1920. Pp. 160. (Doctoral dissertation at the University of Pennsylvania.)

This is a fairly complete survey of the development of insurance in the United States, including the organization of the individual pioneer companies of various standard types, the evolution of company organization, the progress of actuarial science, and the development of the policy contract. Comparatively little attention is given to public control of life insurance. An introductory chapter furnishes a useful survey of the beginning of life insurance in Europe and traces its progress through the eighteenth century.

Teachers of life insurance will find this a useful contribution. Most professional historians will doubtless disagree with the author's conception of the historian's duty, as stated in the Preface: "All who are acquainted with the institution (life insurance) agree that it should be encouraged by every legitimate means. It is useless, therefore . . . . to portray disreputable practices that have been permanently abandoned. On the other hand, false practices that might recur at some future time require the boldest exposition."

There is no bibliography and no index but a very detailed table of contents.

C. O. HARDY

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Public Opinion. By WALTER LIPPMAN. New York: Harcourt, Brace & Company, 1922. Pp. 427.

"Those features of the world outside which have to do with the behavior of other human beings, in so far as that behavior crosses ours, is dependent upon us or is interesting to us, we call roughly public affairs. The pictures inside the heads of these human beings, the pictures of themselves, of others, of their needs, purposes, and relationship, are their public opinions. Those pictures which are

acted upon by groups of people, or by individuals acting in the name of groups, are Public Opinion with capital letters." In these words the author defines the subject-matter of his book.

Almost half of the work is given over to a study of the process by which individual opinions or pictures in the heads of individuals are formed with special attention to the factors that tend to distort them. Mr. Lippman's thesis is that these pictures fail to correspond with the actual world, partly because the individual's access to the facts is limited and partly because the mind does not register with photographic accuracy the facts that are presented. What the individual sees, that is, is dependent not only on what is before him, but also on "the stored-up images, preconceptions, and prejudices" in his mind. Finally the messages received from without and formed by the mind into a pattern of stereotypes are identified by the individual with his own interests. The economist will be especially interested perhaps in the discussion of this last phase, as in it Mr. Lippman examines the doctrine of self-interest. He does not discard the doctrine; he "reconstructs" it. He starts from the theory that the spectator if really interested tends to step out of the passive rôle of spectator into the more active rôle of dramatis personae. Thus to enlist the interest it is necessary to present a picture into which the spectator can project himself. In other words self-interest is the force that must be relied upon to secure attention. Thus over a new route we seem to have arrived at the economic man of the classical economists. We are saved from this fate by a consideration of the nature of self. The old theologians were on the right track, according to Mr. Lippman, when they distinguished between the higher and lower self, the material and the spiritual or whatever names they chose to call them. The truth is that we have not one self or even two selves, but many and that the self whose interest must be enlisted may be any one of these selves and may even be a self of whose existence we are unaware in our conscious moments. The author thinks that this disposes of the "naïve" view of self-interest. He thinks that it disposes also of the economic interpretation of history. If you cannot tell whether the Jones who does a certain act is pursuing the interest of Jones the employer of labor or of Jones the father of a family, there is no such thing as economic determinism. He does not discuss how far it is possible for the interests of these several selves to be kept in water-tight compartments, how far their interests can conflict without a complete disorganization

of the personality, or whether there is any tendency for one self to dominate the others, so that the interests of all are conceived in such a way as not to conflict with those of the dominant self. These questions need to be answered before the economic interpretation of history will rest in its grave.

Only a short section is devoted to the process by which the individual opinions are crystallized into a Common Will. From this it may be inferred that Mr. Lippman regards public opinions as more important than Public Opinion. He believes that Public Opinion is merely the least common denominator of a mass of different opinions agreeing only in consenting or refusing to consent to an overt act. This common denominator is found by the adroit use of symbols with an emotional content which is similar for masses of individuals, but which stands for different things to different men. Consent is thus a manufactured article in which the leaders direct the process and the rank and file are the raw material.

The latter half of the book consists of an analysis of the traditional democratic theory of public opinion and its weakness; of a similar analysis of Guild Socialist theory; of a discussion of the rôle of the press; and of an attempt at a solution of the problems raised by the failure of the theory to correspond with the facts. The criticism of Guild Socialism seems dragged in, and the author evidently enjoys taking part in the popular pastime of finding the weak spots in this equally popular theory.

The discussion of the newspaper is from the point of view of a newspaper man. Particularly interesting is the treatment of the influence of the advertiser. Mr. Lippman recognizes that the necessity for keeping its advertisers plays an important part in determining the policy of a paper. This does not mean that the advertisers dictate directly the paper's policy for he thinks that loss of advertising through offending the advertiser is of infrequent occurrence and slight importance. The important thing to the advertiser is the paper's circulation and this means that care must be taken not to make the paper unpopular with the buying public. Thus the advertisers keep the paper from advocating anything that is not sufficiently orthodox for the readers who can buy the wares the advertisers have for sale.

While this economic influence is important in the failure of the press, more fundamental is the fact that the function we assign to it is impossible. The press should not be expected to reveal truth (whose "function is to bring to light hidden facts"), except in such

cases as truth and news (whose "function is to signalize an event") coincide. The press in short needs the services of an outside organization whose business it is to search for truth and accumulate the data on which true pictures can be built up.

This introduces the positive remedy for the defects of Public Opinion, which have been analyzed at such length. The remedy consists in the organization of bureaus of research and information connected with the various departments of the government. Furthermore it should be the task of political science particularly and the social sciences more generally, to advise systems for accurately recording and measuring phenomena which are important factors in our actions but for which our present systems of record and measurement are inadequate or inappropriate. It is a challenge to the social sciences, and it may be that they have no claim to the title of science until they can meet that challenge. The question might be raised, however, as to the ultimate possibility of reducing qualitative differences to quantitative terms as the word measurement implies. At any rate Mr. Lippman shows insufficient recognition of the extreme difficulty of the task he has rather lightly assigned to social science.

It need scarcely be said that a book by Walter Lippman is brilliantly written and readable. It draws on a wide range of material for illustrations and for ideas. If there is any criticism in this respect it is that the author tends to transfer bodily too much of the work he is quoting. The first chapter for example is made up almost entirely of quotations from Pierrefeu, G. Q. G. *Trois ans au Grand Quartier General*. The book will probably be particularly valuable to those who have not had time to keep up with the recent developments in psychology, especially as applied in the field of political science. Those who have so kept up will find in it less that is new, but much that they are glad to have said, expressed in a way that is clear and easily remembered. People will probably disagree as to the value or at least the adequacy of the remedy proposed. It is interesting to observe that in the importance attached to measurement the author agrees (although he fails to note that fact) with Mr. and Mrs. Webb, who make measurement and publicity the keynote to their Constitution for the Socialist Commonwealth of Great Britain.

HELEN R. WRIGHT

UNIVERSITY OF CHICAGO

Form and Functions of American Government. By THOMAS HARRISON REED. Revised edition. Yonkers: World Book Co., 1921. Pp. xv+549.

The revision of this volume, first published in 1916, was undertaken in order to incorporate the changes brought about by the war in American government. The general plan of the book remains untouched, and the reviewer notes occasional omissions of recent changes which would seem to be marked for notice. Selection of material, however, becomes a constantly increasing difficulty in the preparation of a general text; and the efficiency movement is making such rapid strides that any choice of illustrative material or even any detailed selection of topics to be treated is likely to become out of date.

On the whole this book remains a traditional secondary-school text in civics. Due and grateful allowance made for well-chosen cuts, for chapters on the functions of government, for an account of parties, for the recognition of administration and the civil service, it must still be said that the book is conceived and written in the traditional acceptance of civics. The high-school student will learn here the elements of the structure of government, federal, state, and local; he will be presented with an analysis of party organization and party purposes; he will read about many of the things that government does. What he will read is well written and accurately written. It is written, too, without committing the unsuspecting reader to any "ism" or philosophy; so careful, indeed, has the author been to refrain from any suspicion of propaganda that the book lacks a certain indefinable quality, which is the reflection of personality.

The author writes in his Preface that one object of the book is "to make better citizens and better government"; and in so far as an intellectual comprehension of forms and functions can bring this about, the author has succeeded. As in all the traditional books, however, one misses the analysis and description of the forces and influences which operate the machinery of government and which give vital significance to forms and functions. This omission deprives the study of government of a goodly share of its importance and leaves the eager student with a disheartening set of rules, offices, powers, dates, and names which somehow strangely fail to function in the real world of politics.

It may be impossible, also, to put in a book something of that crusading spirit which will make students care for good government

as well as know what it is; something which will burn within them when they take their places in the world's work, and urge them to play their effective parts in government and politics. If this is true, one cannot justly criticize a book which in the absence of that rare quality leaves one a little cold; but with the enormous possibilities of touching the imagination and the heart of young Americans whose minds have not yet been wholly set, one must regret that our equipment in civics textbooks is still fixed in the traditional descriptive forms. Among such books, however, the reviewer knows of none which are to be preferred to this ample volume by Professor Reed.

L. D. WHITE

UNIVERSITY OF CHICAGO

What Is Social Case Work? An Introductory Description. By MARY E. RICHMOND. New York: Russell Sage Foundation, 1922. Pp. 268. $1.00.

This volume reveals several important tendencies in social work: (*a*) the rapidity with which the thinking of social workers is approaching that of social scientists; (*b*) the increasing emphasis upon the social psychological aspects of case-work; (*c*) the rapidity with which social case-work is attaining the dignity of a profession; and (*d*) a growing willingness on the part of professional social workers to take the public into its confidence in the attack upon case-work problems.

The author answers the question set by the title thus: "Social case-work consists of those processes which develop personality through adjustments consciously effected, individual by individual, between men and their social environment" (p. 98). However, the cases chosen to illustrate the problems and methods of social case-work have been selected and discussed in a manner which may suggest to some social workers that a more precise title would be: "What Is Social Case Work, Ideally?"

Miss Richmonds' long experience in first-hand contact with the problems in this field lend unusual authority to her writings. The subject-matter is so presented that it is wholly intelligible to interested laymen and at the same time it is an important addition to the library of the professional.

ERLE FISKE YOUNG

UNIVERSITY OF CHICAGO

New Viewpoints in American History. By ARTHUR M. SCHLESINGER. New York and Chicago: The Macmillan Company, 1922. Pp. xiv+299.

Since the opening of the present century a significant transformation has occurred in the writing of American history. During these years a new school of American historians has replaced the chiefly political and constitutional story of American history with one strongly colored by new interests, viewpoints, and sympathies. For the most part this new story is inaccessible to the layman and to history teachers in elementary and high schools because it lies buried in the files of historical journals and the publications of local and national historical societies and in the multitude of monographs on special phases of American history that have been written recently. Realizing the gravity of this situation Professor Schlesinger, of the State University of Iowa, set out to rectify it. To say that his book meets real and vital needs of history teachers is but a mild way of stating the facts in the case.

In twelve well-balanced and interestingly written chapters Professor Schlesinger brings together the results of the recent researches in the field of American history in a non-technical manner which is sure to attract the general reader and the history teacher. These chapters deal with such subjects as the influence of immigration on American history, geographic factors in American development, economic influences, aristocracy in American history, radicalism and conservatism, the rôle of women in American history, the American Revolution, economic aspects of the movement for the constitution, the significance of Jacksonian Democracy, state rights, the modern era, and the riddle of the parties. For the one who cares to read more widely on the topics treated there appears a valuable bibliographical note at the end of each chapter. To many readers these notes will be of immense value inasmuch as they contain a list of the most important contributions of the new school of American historians.

Professor Schlesinger's book should be read not only by history teachers but also by teachers of economics, geography, sociology, and political science, for the new conceptions and fresh points of view recently afforded by these subjects have had much influence in reconstructing the new story of our past. A worth-while use also to be made of the book would be to have each member of a senior high

school American history class read it in connection with or on completing the course. Such a use would overcome some of the present difficulties experienced by teachers who must use, as is inevitible in this particular field of history, textbooks which are a generation behind the times.

R. M. TRYON

UNIVERSITY OF CHICAGO

The Housing of the Unskilled Wage Earner. By EDITH ELMER WOOD. New York: Macmillan, 1919. Pp. 321. $2.25.

Mrs. Wood aims to supply a factual basis for the construction of a rational housing policy. She does not try to gather any new facts in a field in which so many investigations have already been made, but brings together the facts which have hitherto been available only in a large number of separate reports and government documents. The weakness of American communities in dealing with the problem is clearly brought out. This is especially true when it comes to positive action, in the form of attempts to supply good homes for the poorer citizens. What she finds to record here is pitifully small. Except for the work of the Massachusetts Homestead Commission and the war emergency work of the federal government, there is nothing more than a gesture and a promise which may or may not be fulfilled. Her own outline of a suggested policy is carefully worked out and makes good its claim to being a comprehensive policy. It is not radical; it suggests nothing that has not been successfully tried some place, and yet it does not copy blindly the policy of foreign countries but keeps clearly in mind our own constitutional and legal system as well as our economic conditions.

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